



## User Manual

- Thank you for purchasing the IP camera tester. Please read this manual before using the IP camera tester and use properly.
- For safety purposes, please first read the Safety Information in the manual.
- The manual should be kept with the Tester for reference.
- If there is any question or problems while using the IP camera tester please contact our Technical Support department at 855-388-7422.

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# 1. Safety information

The tester is intended for use in compliance with the local rules for electrical usage. Avoid using in places which may be inapplicable for the use of electronics such as hospital, gas station etc.

- ◆ To prevent operational failure, the product should not be exposed to moisture.
- ◆ It is highly recommended to avoid violent collision or heavy vibration to the tester during transportation and use, heavy vibrations or collisions can damage the tester.
- ◆ The tester **should not be charged for more than an 8 hour period**. If the battery is found severely hot, the tester should be removed from the electric source at once.
- ◆ Do not use the tester where the humidity is high. If the tester becomes wet or damp, power off immediately and disconnect cables.
- ◆ The tester should not be used in the environment with the flammable gas.
- ◆ Do not disassemble the tester, there are no user serviceable parts inside.
- ◆ The tester should not be used in an environment with strong electromagnetic interference.
- ◆ Do not use heavy detergents to clean the LCD screen. If dirt is not easy to remove, then the unit should be powered down and cleaned with a soft, dampened cloth. Only a small amount water and neutral detergent can be used.

## 2. IP Camera Tester Introduction

### 2.1 General

The 3.5 inch touch screen IP camera tester is designed for maintenance and installation of IP, HD-TVI and Standard Analog cameras. The tester supports both ONVIF PTZ and analog PTZ control and UTC control (TVI camera dependant). The combination of touch screen and key buttons make the IP camera tester very user friendly.

Built in PING & IP address searching functions can diagnose the location of the network cable's short circuit and open circuit. Test LAN cable or telephone cables and the sequence of wires. Its portable, user-friendly design and multi-functions make the IP camera tester an essential tool for the installer or

technicians, greatly improving working efficiency and simplifying the installing and maintenance. For convenience, the tester also includes a LED lamp & 12VDC output for powering 12VDC cameras.

## **2.2 Features**

- 3.5inch 480×320 touch screen, easy to operate display.
- ONVIF IP camera test function.
- Test some customized brands's H.264/MPEG4/MJPEG IP cameras, such as HIKVISION, ACTI, etc.
- Built in Wi-Fi can receive images from wireless camera, as well as ONVIF and customized IP cameras.
- TVI camera image display, record and screen snapshot.
- Analog camera image display, NTSC/PAL auto sensing
- Supports more than 30 protocols, such as PELCO-P、PELCO-D、SAMSUNG etc
- Video image magnification.
- Snapshot and save the current image as JPG file in the SD card, video record and playback.
- LED Lamp, easy to operate at night.
- Removable 4GB Micro SD card included.
- LCD screen brightness/contrast/color/saturation adjustable.
- Enhanced Color bar generator.
- Ping test, PING 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.
- IP address scan, quickly search the connected IP camera or other network device's IP address.
- Pass through PoE voltage test for testing PoE voltage when the POE switch is supplying POE power to IP camera.
- Cable tester for LAN cable, UTP cable etc, cable type and the sequence of wires will be displayed
- Supports RS485, Rate 600 ~ 115200bps adjustable
- PTZ protocol analysis, control protocol command displays to check whether RS485 transmission is normal, easy to find the fault device.
- PTZ control. Pan/tilts the P/T unit, zooms in/out the lens, adjusts the focus, aperture and sets and the

preset position

- DC12V 1A output power for camera
- Audio input, test the audio signal
- 3.7V 3400mAh, Lithium Ion Polymer Battery can last 10 hours of normal use after charging for 4-5 hours.

## **2.3 Function**

### **2.3.1 Touch Screen and OSD Menu**

The IP camera tester combines both touch screen and key buttons for improving efficiency and simplifying installation and maintenance. The user can move function icons from the tester's main menu to APPS tool file or move them back, to make the main menu look simple and clear.

### **2.3.2 IP Camera Test**

The device is designed with ONVIF test, IP camera test, browser functions, etc. It can display the image from the IP camera and allows for changing the IP address etc. Use the ONVIF TOOL to display the image from IP cameras and control PTZ's. Currently the IP camera tester supports more than 30 brands of IP cameras, such as ACTi, Dahua (IPC-HFW2100P), Hikvision, (DS-2CD864-E13), Samsung (SNZ-5200), Tiandy (TD-NC9200S2), Panasonic (WV-SP305H), Honeywell (HICC-2300T), Aipu-waton (IP5000-BC-13MP/IRS06-13MP) etc. **\*does not support all models from every manufacturer.**

### **2.3.3 TVI Camera Test**

HD-TVI supports 720p & 1080p camera image test and video image zoom, record, screen snapshot, Photo viewer and playback.

### **2.3.4 Standard Analog Camera Test**

Displays standard analog camera images. Support PAL/NTSC format. LCD screen backlight brightness adjustable, and analog video image brightness/contrast/color Saturation adjustable

### **2.3.5 PTZ Controller**

Display the input video images. Pan/tilt and zoom in/ out the image. Setup the controlling parameters like protocol, communication port, baud rate, PTZ ID, pan/tilt speed; set and call preset position.

### **2.3.6 Enhanced Color Bar Generator**

The tester sends out the color bar by its BNC output to the monitor at the monitoring center. If the monitor receive the color bar, it means the video transmit channel works normally. Meanwhile on the basis of the received color bar, the monitoring center can judge if transmission has loss or interference. The tester can also send out the color bar by its BNC output, then receive and display the color bar by its BNC input to test on-site video transmission, such as video optical transmitter and receiver, video cables. The new function of sending the testing image can judge if the monitor receives the image well. The new color bar (red, green, blue, white, black) can test the monitor whether have white or black dot etc.

### **2.3.7 DC12V 1A Power Output**

Power the camera with DC12V (1A) power output from the tester. It is helpful for demo and testing when the power supply is not available

### **2.3.8 Audio Testing**

Test the audio input from pickup devices. Connect the tester and pickup device with the audio cable. Supports audio recording and audio output.

### **2.3.9 Cable Tester**

Test LAN cable or telephone cable.

Connect LAN cable or telephone cable with the CCTV tester and cable tester. And then the connecting status, cable type and the sequence of wires will be displayed, as well as display the serial number of the cable tester kit.

### **2.3.10 PTZ Data Analysis**

Search the Control protocol code from Multifunction keyboard or DVR by RS485 interface, test the PTZ control command data whether received anomaly and RS485 data transmission.

Screen displays 16 hexadecimal codes such as

PELCO-P: A0 00 (Add) xx xxxxxx AF xx

PELCO-D: FF 01 (Add) xx xxxxxxxx

### **2.3.11 Image Magnification**

Set image zoom, by x1, x2, x3, x4 10 times. Supports analog camera, ONVIF ,as well as some brands' specified models, such as Hikvision、ACTi、 Samsung camera

### **2.3.12 Video Screenshot**

Capture the video image, and save the current video image in the SD card.

### **2.3.13 Record**

Capture the video frames as JPEG file, and save the current video in the SD card.

### **2.3.14 Playback**

Save video image and record files in the SD card. Storage file directory can be created according to the date

### **2.3.15 DHCP Dynamic Address Assignment**

Built in DHCP server, dynamic assign IP address for the IP camera or network device, meanwhile inquire and display the assigned IP address.

### **2.3.16 Access the Dynamic IP Address**

The IP tester can directly access the dynamic IP address assigned from its DHCP server and used it as the tester's IP address. It does not need to be manually set up.

### **2.3.17 Multi- Segments IP Cameras Test**

Support Multi-segment Static IP address setting, can simultaneously test different segments IP network cameras.

### **2.3.18 Network Bandwidth Testing**

Network channel bandwidth test, need two IP camera testers to test, one as a transmitter, the other as a

receiver, Or install the testing software in the PC firstly, then work with one IPC tester to test the network channel bandwidth.

### **2.3.19 IP Address Scan**

In digital IP surveillance applications, if IP camera's IP address is not clear or forgotten; the device cannot be used .IP address scan can quickly search the connected IP camera or other network device's IP address.

### **2.3.20 PING Test**

PING 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.

### **2.3.21 Port Finder**

The tester will send special signals to make the connected POE 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.

### **2.3.22 PoE Test**

It can test the PoE voltage when the POE switch is supplying the POE power to IP camera. It can clearly display the power+ and power- on the Ethernet cable pins, each cable pin's voltage and the failure connection of cable pin series numbers.

### **2.3.23 LED Lamp**

It is useful for the user to install and maintain security system at night. Press button LED On/Off, easy operation.

### **2.3.24 OSD Menu Rotates in 180 Angle**

OSD menu can be rotated in 180 angle by manual setting. This function is very convenient for the user to upward the downside to connect the LAN cable and do the testing.

## **2.4 Packing List**

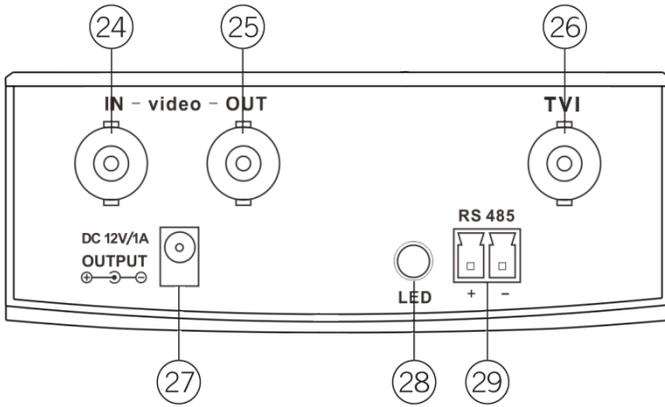
- 1). Tester
- 2). Deluxe Carry Case w/Lanyard
- 3) Safety Lanyard for Tester
- 4) 5VDC Wall Charger Polymer lithium ion battery (3.7V DC 3400mAh)
- 5) USB to Micro USB Charger Cable
- 6) BNC Patch Cable
- 7) 12VDC Output Cable for Camera Power
- 8) RS485 Cable w/Alligator Clip
- 9) PC Audio Cable w/ Alligator Clip
- 10) CAT5/6 Cable Termination Block
- 11) Manual
- 12) 4G SD card
- 13) Polymer Lithium Ion Battery (3.7V DC 3400mAh)

## 2.5 Function Introduction:



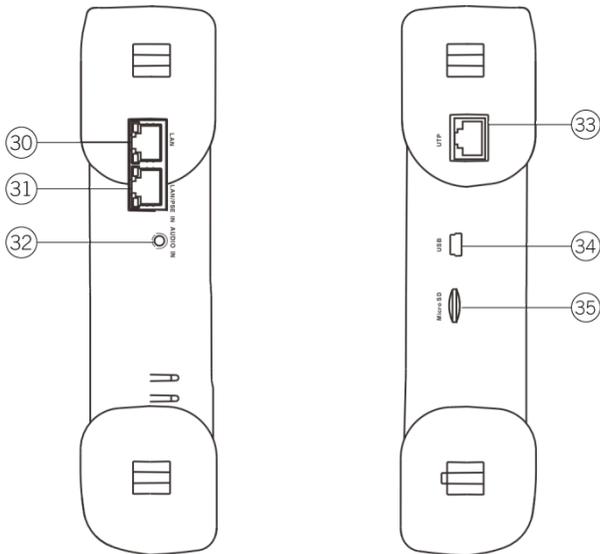
1		Press for 2 seconds turns on/off the device, Quick press turns on/off menu display
2		Set key
3		Menu key
4		Far focus: Focus the image far away
5		Near focus: Focus the image nearby
6		TELE: zoom in the image
7		WIDE: zoom out the image
8		Open/set ,Confirm the setting of parameters, open or enlarge the aperture
9		Return/Close : Return or cancel while setting menu parameters, decrease the aperture
10		Up, set function or add parameter. Tilts the PTZ up
11		Right, select the value to be changed. Add the value of the parameter. Pan the PTZ right
12		Leftward, select the parameter whose value will be changed
13		Downward, set function or reduce the value of the parameter. Tilts PTZ down.
14		Open/set ,Confirm the setting of parameters, open or enlarge the aperture
15		Snapshot
16		Video record
17		LED lamp
18		Confirm key
19		Returns to the previous menu.
20		The power indicator: it lights green while the tester is powered on by the adapter
21		The data accepted indicator: it lights red while the data is being received
22		The RS485 data transmission indicator: lights red when data is being transmitted
23		The charge indicator: shows red while the battery is charging. Turns off when complete.

Top interface



Left interface

Right interface



24	Video image signal input (BNC interface)
25	Video image signal output (BNC interface) /cable scan interface
26	TVI test interface
27	DC12V1A power output , for provisional DC power supply
28	LED lamp
29	RS485 Interface: RS485communication for the PTZ
30	Lan test interface
31	PSE power supply input interface
32	Audio input
33	UTP cable port: UTP cable tester port/ Cable tracer port
34	DC12V1.5A charging interface
35	Micro SD card moveable, default 4G, support Micro SD card up to 32GB

## 3. Operation

### 3.1 Installing the Battery

The tester has built-in lithium ion polymer rechargeable battery. Open the hatch on the back of the tester, connect the battery cable to the tester cable (make sure the red and black wires on the battery cable match those on the tester cable) The battery cable inside battery cabin should be disconnected if the tester will not be used for a long period of time.

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



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 the IP camera by outer power source, 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 well connected. If the two indicators do not work, check if the IP camera is powered on or the network cable is ok.



### 3.2.2 Analog Camera Test



- (1) The camera's video output is connected to CCTV Tester VIDEO IN, the image displays on the tester .
- (2) CCTV Tester "VIDEO OUT" interface connects to the Video input of monitor the image is displayed on the tester and monitor
- (3) Connect the camera or the speed dome RS485 controller cable to the tester RS485 interface, (Note positive and negative connection of the cable).

### 3.3.3 HD-TVI Camera Test



- (1) Connect the camera video output to the CCTV Tester TVI BNC to display the image on the tester. Tester only supports TVI IN it does not support TVI OUT function.
- (2) Connect the camera or the speed dome RS485 controller cable to the tester RS485 interface, (Note positive and negative connection of the cable).

### 3.3 OSD menu

- Press the key  2 seconds to turn on
- Press the key  2 seconds to turn off
- Quickly press the  key to enter sleep mode, quickly press it again to test to exit sleep mode. and cannot be turned off , Press and hold the  key for several seconds to reset the tester, it will turn off and you will need to press the  key to restart the tester.



Select Icons to enter, to quit click  or the  button.



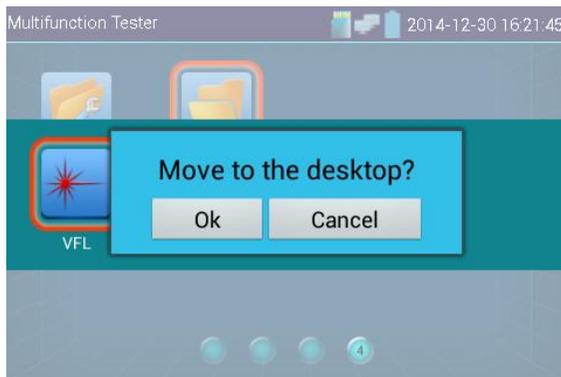
If some Icon functions will not be used you can press and hold the Icon for two seconds, to bring up the “Move to APPS dir” and press “Ok” for it to be moved to the “Tool” icon folder.



Click icon “Tool” icon to show all collected function icons, Click the  button to return to the tester’s main menu.

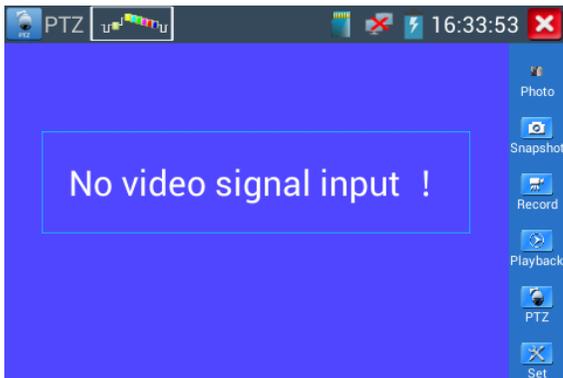


Any functions moved to “Tool” icon can be moved back to the desktop by pressing and holding the icon for two seconds then pressing “OK”.



### 3.3.1 Video Monitor Test (Standard Analog & PTZ Control)

For Standard Analog camera testing and PTZ control, click the  icon.



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

Click  to quit, or press  to return to the main menu screen

Click the screen twice quickly to remove the right side Toolbar and go to full screen mode, click twice quickly to exit full screen model and bring back the right side Toolbar.

#### 3.3.1.1 PTZ Controller Parameter Setting

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



### **A. Protocol**

Click on the protocol box to enter a list of protocols, drag the list up or down then click on the desired protocol. The left and right arrows can also be used to scroll through the protocol menu. move the Supports more than thirty PTZ protocols. Such as Pelco-D, Samsung, Yaan, LiLin, CSR600, Panasonic, Sony, etc.

### **B. Port**

Click the “port” button to select the communication port for the PTZ camera controlling (only RS485 is available on the tester)

### **C. Baud**

Click the “Baud” button to 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 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 be used to call some special preset numbers, can also call the dome camera menu



Protocols, address, interface and baud rate must all be consistent with the dome camera in order for the IPC tester to work properly. After setting the parameter, the tester can control the PTZ and lens

To control PTZ by screen touch:

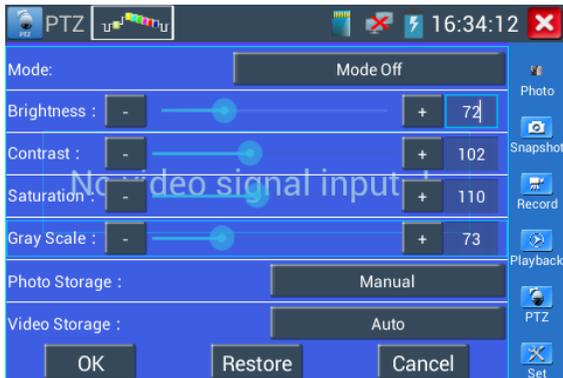
Tap left, right, up or down on the touch screen to control the PTZ rotation direction. Using two fingers pinch inward or spread outward on the touch screen to zoom in and out the PTZ.

- ◆ Press the  or  keys to control the PTZ direction of rotation
- ◆ Press  or  to switch on or turn off the aperture.
- ◆ Press  or  to adjust the focus manually
- ◆ Press  or  to manually adjust the zoom

### 3.3.1.2 Video and Storage Setting

Click icon “set”, to enter and set analog video image brightness, contrast, color saturation, screen snapshot, recording and storage support; Auto-storage and manual storage

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

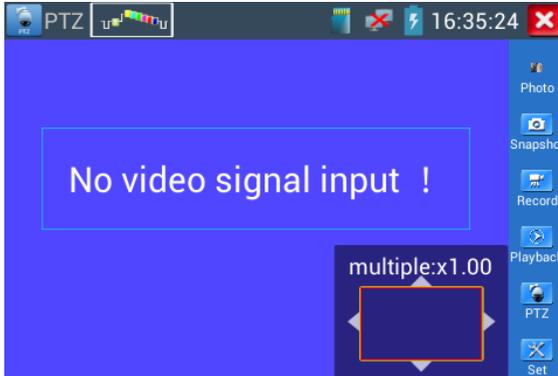


### 3.3.1.3 4x Zoom Image Display and Video Out

Press  to enter “zoom”, press it again to quit.

Using two fingers spread outward or pinch inward on the touch screen to zoom in and out the image.

When the image is enlarged, click left, right, upward and downward the image to view every detail.



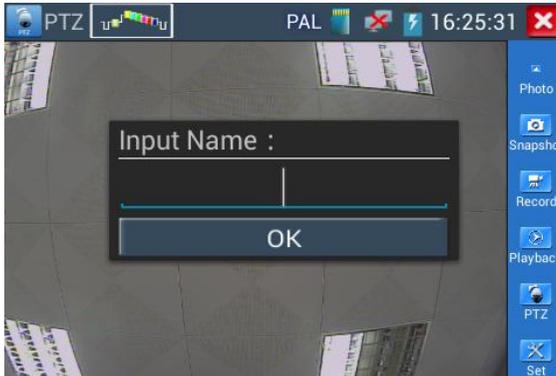
You can also press the key  to zoom out, press the key  to zoom in, press upward and downward key to move the image



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

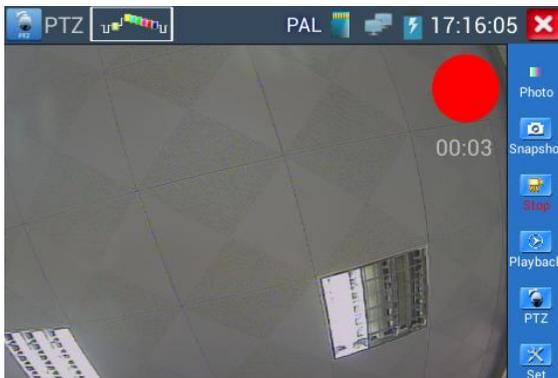
### 3.3.1.4 Snapshot

Click the icon “Snapshot”, when the video in, to snapshot and save the current video frame in the SD card as JPEG file. If selecting manual storage, “Input Name” appears in the dialog box. User can define the files name (by Chinese character, English letter, or digit) to save to SD card. If “Auto-storage” is selected tester auto stores the files after snapshot.



### 3.3.1.5 Video Record

Click icon “Record”, when there is video connected, the tester starts to record, the red recording icon appears on the screen and begin to flash and count, click the icon “Record“ again to stop recording and save to the SD card. If selecting manual storage, “Input Name” appears in the dialog box. User can define the files name (by Chinese character, English letter , or digit ) to save to SD card.



### 3.3.1.6 Photo

Click the “photo” icon to enter, click the selected thumbnail photo to display it on the screen.

Double-click the photo to make it full display. Double-click the photo again to return.



Press and hold the photo for several seconds to rename or delete the files.

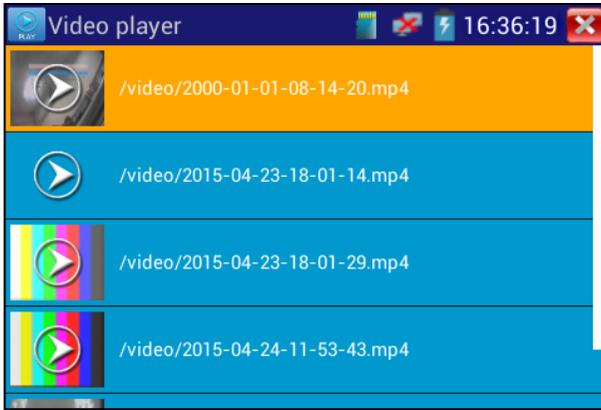


Click  to close and return to PTZ controller.

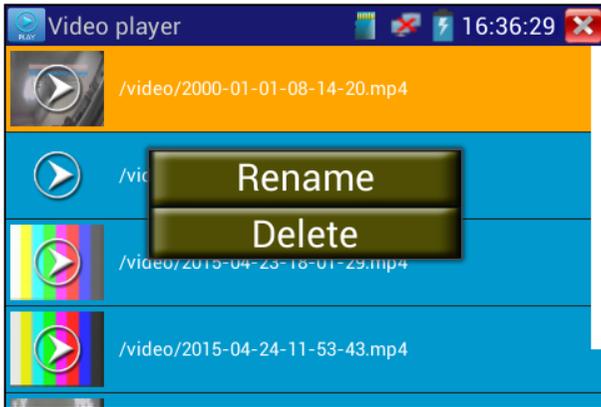
### 3.3.1.7 Record Playback

Click “playback” icon to enter

Double-click the files to play, Click on the top right icon  to close and return to PTZ controller.



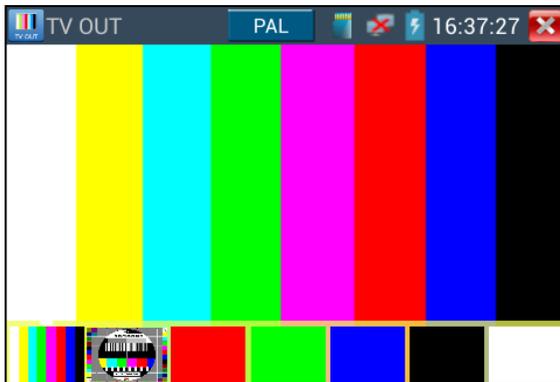
In the video "Playback" interface, Press and hold the recording for several seconds to rename or delete the files.



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

### 3.3.2 Color-Bar Benerator (TV OUT)

Click  to enter, the tester will send the color bars from the “Video out” port. Click the “PAL”, icon to select between “PAL/NTSC” output formats.



Click the selected color-bars, testing image or single bar ( red, green, blue, white or black). Double click to full display on the screen and output, click  to return main menu.

#### Application

- A. When maintaining the dome camera, the tester sends out the color bar by its BNC output to the monitor at the monitoring center. If the monitor receive the color bar, it means the video transmit channel works normally. Meanwhile on the basis of the received color bar, the monitoring center can judge if transmission has loss or interference.
- B. The tester sends out the pure color bar (such as white and black color), to test the monitor whether has bright or black dots
- C. The tester sends out video signal image to test if the image received by the monitor has excursion.

### 3.3.3 ONVIF

ONVIF tools support HD and LD test modes .When IP camera stream is MPEG4, please select LD mode display. HD mode cannot support MPEG4. While in LD mode, if the network camera resolution is 720P. the image display may be delayed. In HD mode, the network camera stream is H.264; The tester can display the image up to 1080P.

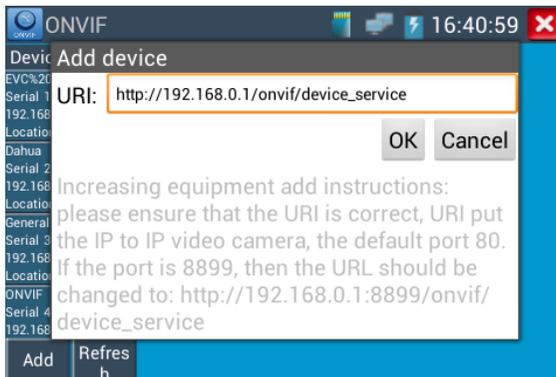
Click the  icon to enter ONVIF, the “ONVIF” icon for LD mode & the “ONVIF HD” icon is for HD mode



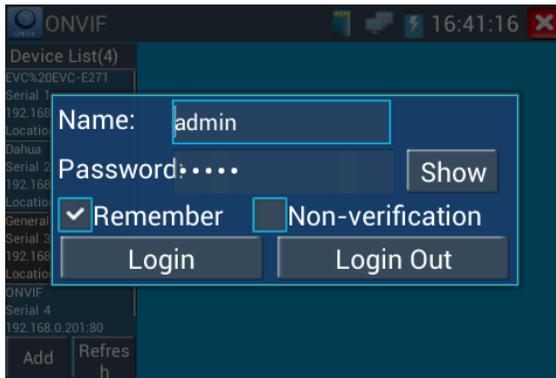
Click the  icon to enter. The tester will Auto-Scan different network segments of ONVIF cameras and list the camera name and address on the left side of the screen. Some cameras may not need user name and password to login, if so please select “Non- verification” to login the camera.



If some IP cameras cannot be auto scanned by the tester, click “Add”, on the bottom left of the screen. Users can add camera manually, but URL address should be identical to the ONVIF camera service address.



Click the “Refresh”, button and the tester will scan the ONVIF camera again. The newly displayed ONVIF camera will appear below “Device List”, the tester will show the IP camera relative information and setting.

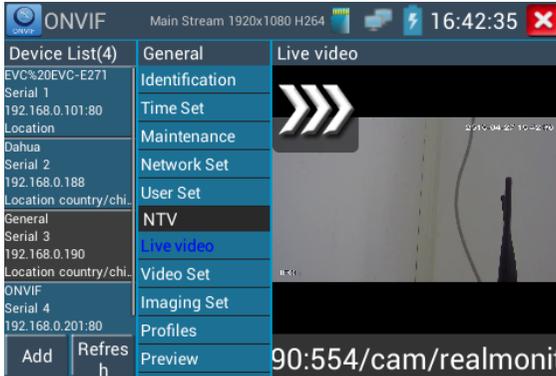


Click ONVIF camera below “Device List” to operate (Device Set, Time Set, Maintenance, Network Set, User Set, Live Video, Video Streaming, Image Set, etc). Some functions can only operate with the IP camera authorization.

**Live Video:** click “Live Video” to enter & show the IP camera image. Double clicking image area, can go to full screen image. Using two fingers move outward on the touch screen to zoom in the image. When the image is enlarged, click left, right, upward and downward the image to view every detail.



**ONVIF PTZ Control:** click the image to move left, right, upward, downward, or zoom in or zoom out, IP dome camera will rotate correspondingly, PTZ rotation direction is displayed in the upper left corner of the image.



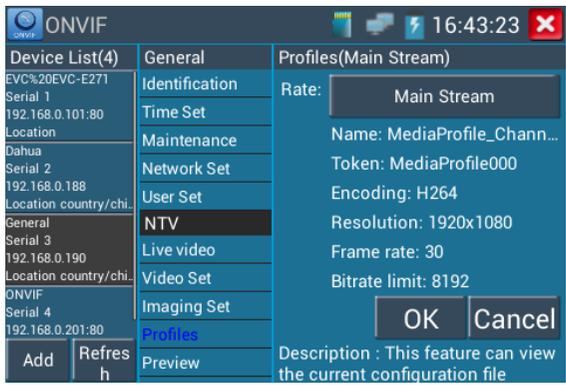
**Video Streaming:** Click “Video Set” to enter and set the IP camera decoding resolution, click “OK” to save.



**Image setting:** Click “Image set” to adjust image brightness, saturation and contrast.



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

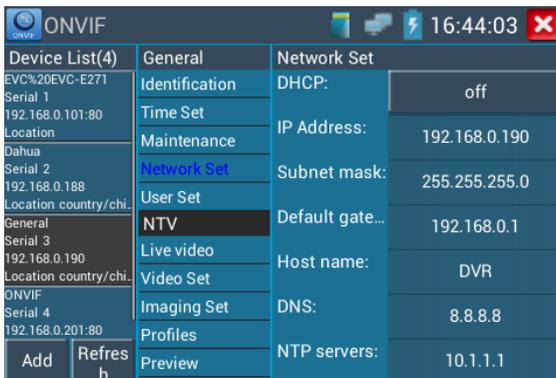


**Preview Pictures:** Quickly preview and zoom in or out pictures, automatically and manual refresh.



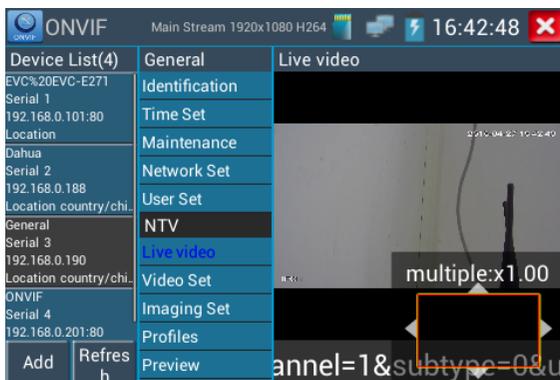
**Network setting:** Click “network set” to change the IP address. Some cameras cannot support change

IP address, so there is no change after saving.



**Zoom in Image:** press the  key to enter, press it again to quit.

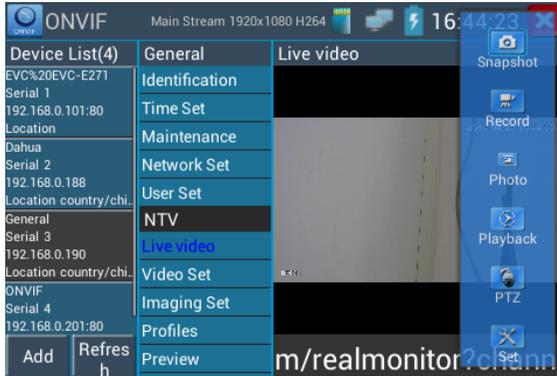
Using two fingers pinch outward and inward on the touch screen to zoom in and out the image. When the image is enlarged, click left, right, upward and down to view details.



When the image is enlarged, if not operate on touch screen, it can be operated by the keyboard ,press the  key to zoon in, press the  key to zoom out, press up and down key to move image .

Image can only be enlarged on LD mode (The icon “ONVIF” is LD mode.)

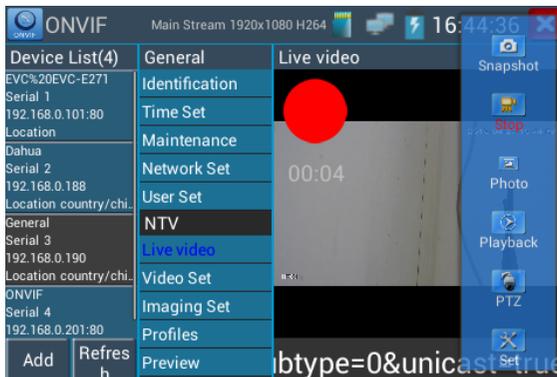
On the “Live Video”, interface; click “Video Menu” to make the toolbar appear: Snapshot, Record, Photo, Playback, PTZ, Set, etc.



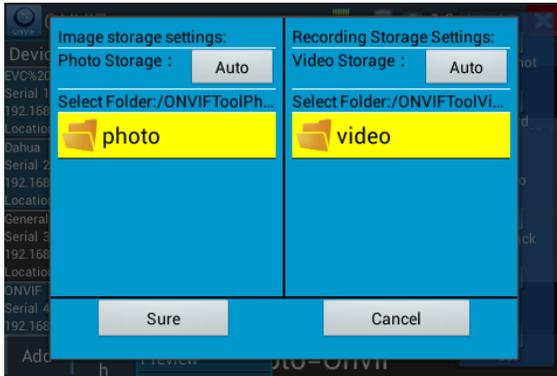
**Snapshot:** Click “snapshot” to capture screen shots and store

If selecting “Auto-recording”, the tester auto-records the files after screenshots. If selecting manual storage, “Input Name” appears in the dialog box. User can define the files name (by Chinese character, English letter, or digit) to save to SD card.

**Record:** click “record” to start recording, the recording icon turns to red and flashes. Click the icon again to stop recording and save in the SD card. If selecting “Auto-recording”, the tester auto-records the files after screenshots. If selecting manual storage, “Input Name” appears in the dialog box. User can define the files name (by Chinese character, English letter, or digit) to save to SD card.



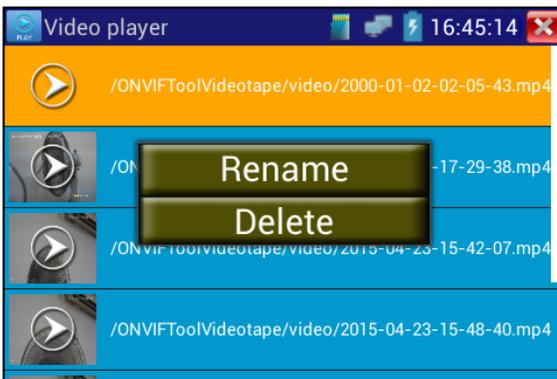
**Set:** Click the “Set”, icon to select Photo and Record function. If using Auto-name, Photos and recording files automatically store, if manual, user define file names.



**Playback:** Click the “Playback” icon to display video files, double click to play, click  to return



Press and hold the video files to delete or rename.



Video files can play in the Video player of the main menu

### 3.3.4 IP Camera Test

Click the  icon to enter IP camera test

Display high-definition images, support snapshot, video record and playback. Currently, the IPC tester only supports some brands' specified IP cameras; the brands include Dahua, Hikvision, Kodak, Samsung, etc. OEM service is available.



Note: This function can only be used for the specified IP cameras, for example Dahua, Hikvision, etc, but please note this is not compatible with every cameras from the specified manufacturer. If the IP cameras come from the same manufacturer but have different network communication it will not be compatible with the tester.



IPC Test		16:45:53
Local IP :	192.168.0.221	Edit
IP camera type :	HIKVISION_DS-2CD864-E13	Manual
IPC Cameras IP :	192.168.0.64	search
IPC User Name :	admin	
IPC Password :	.....	Show
IPC Port :	5198	
Enter		Reset
Restore		Rate

**Local IP:** This is the tester's IP address, supports Multi- network segment IP camera test. Click on the display to enter "IP setting" and set the tester's IP address. You can add IP address of the Different network segments, click "set" to save, click the  icon to close and return to IPC test interface.

## IP Camera Type:

1. When "IP camera type" is set to "Manual", Please manually select type.

Click IP camera type - Lists Honeywell, Kodak,Tiandy, Aipu-waton,VVS, 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 )



The screenshot shows the IPC Test application interface. The title bar reads "IPC Test" and the system clock shows "16:45:53". The interface is a form with the following fields and values:

Local IP :	192.168.0.221	Edit
IP camera type :	HIKVISION_DS-2CD864-E13	Manual
IPC Cameras IP :	192.168.0.64	search
IPC User Name :	admin	
IPC Password :	.....	Show
IPC Port :	5198	

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

2. When IP camera type is set to "Auto", the tester auto- matches the camera type.



The screenshot shows the IPC Test application interface. The title bar reads "IPC Test" and the system clock shows "17:16:28". The interface is a form with the following fields and values:

Local IP :	192.168.0.232	Edit
IP camera type :	HIKVISION_DS-2CD864-E13	Auto
IPC Cameras IP :	192.168.0.190	search
IPC User Name :	admin	
IPC Password :	.....	Show
IPC Port :	5198	

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

**IPC Camera's address:** Enter IP camera's IP address , click “Enter” to add IP address of the Different network segments, support multi- network segments' IP camera test .

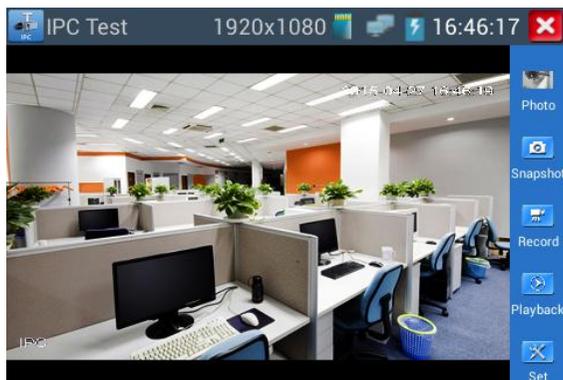
Click “Search” to auto-scan the IP camera's IP address and display. It is better to directly connect IP camera to the tester so that the tester will search out only one IP address. If the tester is connected to PoE switch, it will search out several IP address.

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

**IPC Password:** Enter IP camera's login password, it will not show relevant letters, click “show” to show the password.

**IPC Port No.:** Enter the IP cameras default relative camera port number.

After setting, click “Enter” to enter image interface.



If IP address setting has error or IP camera is not connected. The tester prompts “Network Error”

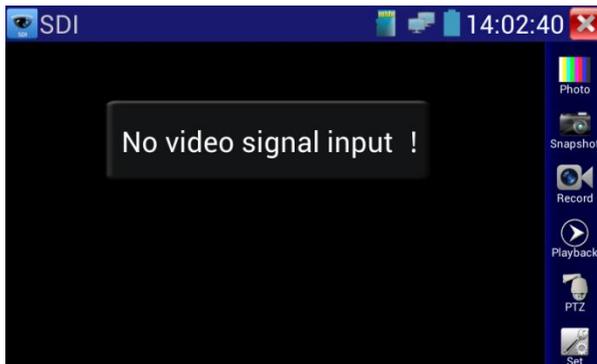
Click  to quit from image display and return to IP camera test interface.



Under the IPC Test, on the IP camera image display, there is “Video Menu” icon, click “Video Menu” to display the toolbar: Snapshot, Record, Photo, Playback, PTZ, Set, etc. Please refer to ONVIF to use these functions.

### 3.3.5 TVI Camera Test

TVI camera test, Dome camera test and PTZ control, click the  icon to enter.



When tester receives TVI camera image, it will display the image data. Double click the screen, the image display in full screen mode.

The tester supports the following resolution.



1280×720P 25Hz / 1280×720P 30Hz / 1280×720P 50Hz / 1280×720P 60Hz  
1920×1080P 25Hz / 1920×1080P 30Hz / 1920×1080I 50Hz / 1920×1080I 60Hz

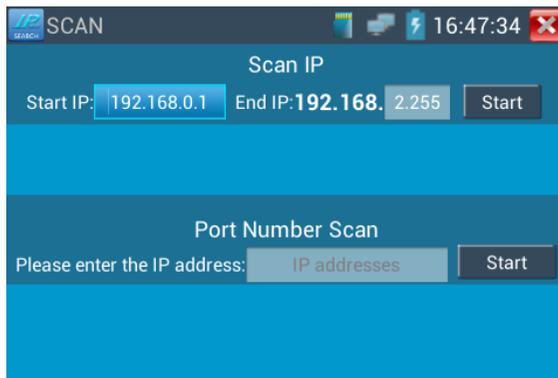
Select relative function on the right side Toolbar to operate , “Snapshot“ , “Recording”, “Photos” ,

“Video playback”, “PTZ control”, operation is the same as the video monitor function, Please refer to the relevant instructions in section “3.3.1” if the manual. To access UTC control (if available on camera) hit the enter button on the keypad. Note \*you may be required to enter PTZ control first and select Menu in the protocol settings.

Click  or press  to quit and return the main menu.

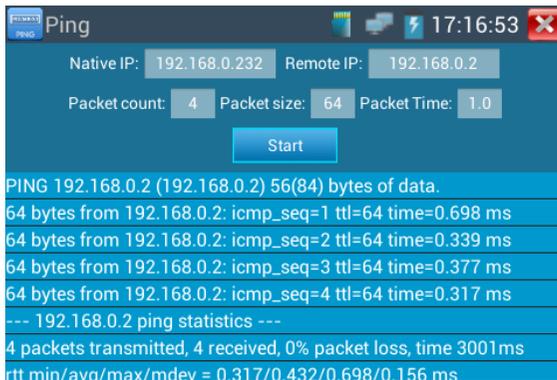
### 3.3.6 IP Address Scan

Connect the cable to the LAN port, click the  icon to enter, set initial IP and destination IP address. The tester’s IP address network segment can be the same or different from the scanned network device’s network segment. Click the key “Start” to scan, quickly to search the IP address, you can also **input the IP address in the Port Number Scan** to scan to port number, check the tested device’s supporting port number and how many ports can support the device’s network communication..



### 3.3.7 PING Test

Connect the cable to the LAN port, click the  icon to enter, select set local IP, Remote Host IP, Packet Size, Packet time Timeout etc. and press “Start” to test. If IP camera or other network equipment are not connected to the tester, the tester will show sending and receiving packet’s quantity inconsistency and Error rate 100%.

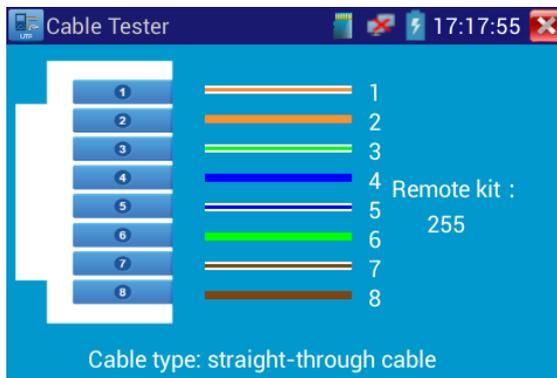


**Application:** PING testing is the most conventional network debugging tools. It is used for testing if the connected IP camera or other network equipment's Ethernet port is working normally and the IP address is correct.

It's normal that the first data packet will be lost when test starts.

### 3.3.8 Cable Test

Click the  icon to enter and Test LAN cable or telephone cable.



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

### 3.3.10 Port Finder

Connect the cable to the tester “LAN” port, click the  icon to enter. Click “Start” to test, tester will send signal to make the connected LAN port flicker at special frequency.



If the tester and PoE switch are connected correctly, the LAN port of POE switch flash at special frequency, If not, no changes to the light on the LAN port will be observed.

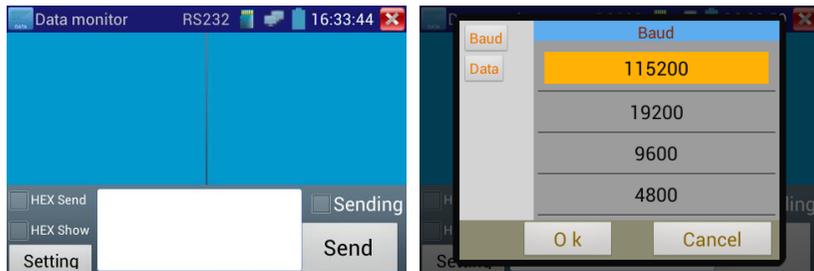


#### Application:

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 mistaken insertion or disconnection of non-corresponding cables.

### 3.3.11 Data Monitor

Click the  icon to enter .



Click “Setting” to choose the baud rate of RS485; it must be the same as the DVR or the Control keyboard. The DVR or Control keyboard will send the code to the tester, if it can be read, the protocol will shown on the upper right, like Pelco D.

**When the tester receives the code, Press the key to clear screen.**

Though the RS485 port, display the PTZ control code of the multifunctional keyboard or the DVR. 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 whether normal. Engineer can analyze the protocol and check the data through the displayed code.

### 3.3.15 Video Player

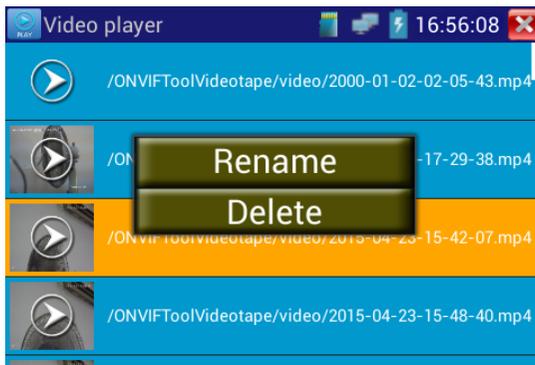
Click the  icon to enter



Video file player can browse image files and supports the following formats MP4, H. 264, MPEG4, MKV, etc. The ONVIF tool, IP camera Test and video monitoring test's video recording can play directly via video player.

Video player can auto-search the video files on SD card, click the display list to play directly, and click RETURN to quit.

Click and hold the files for several seconds to delete or rename the files.



### 3.3.16 Music Player

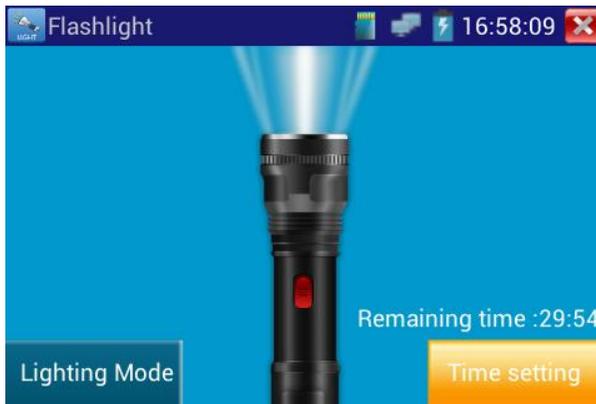
Click the  icon to enter.

Only supports MP3 format Audio files.



### 3.3.17 LED Lamp (Flashlight)

The LED flashlight is convenient when working in dark environments.



While in the flashlight interface, click the red button, to turn on the LED lamp. Press again to turn off, if the light does not turn off the light and click the  icon to quit.

### 3.3.18 PoE/PSE Voltage Test

Click the  icon to enter PoE voltage measurement.



Connect the cable to the power supply equipment's POE port and the tester's PSE IN port. Connect IP camera to tester's LAN port, the POE voltage and the cable's pin connection status show on the screen.

 Note : the Poe power supply equipment (POE Switch, PSE power supply equipment) must be connected to the PSE IN port, the powered device such as IP camera or wireless AP must be connected to the LAN port, then it measure the voltage correctly.

Please do not connect POE power supply port to the UTP/SCAN port; otherwise it will damage the tester.

### 3.3.20 Calculator

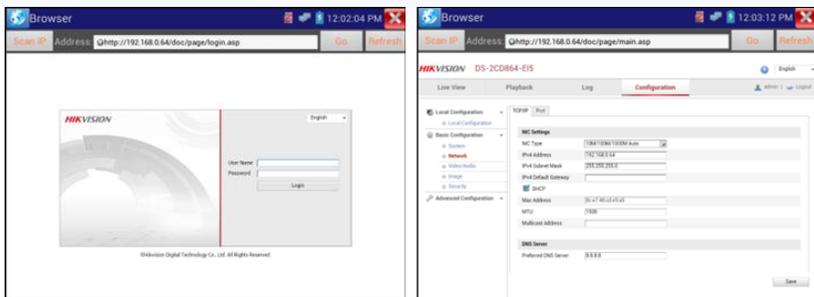
Click icon  to enter



### 3.3.21 Browser

Click the  icon to enter.

Input the IP camera's IP address, or click "Scan IP" to scan, browser can be used to log into IP camera and change IP camera's address.



The IP camera and IP tester must be in the same network segment so that the browser can login to the IP camera successfully. If they are not in the same segment, click  or press “RETURN” to exit. Click main menu “SET” to change and make the instrument and IP camera in a same segment, then can test IP camera. Browser cannot install IP camera’s plug-in, as such it cannot view IP camera’s image.

### 3.3.22 IP Camera Viewer

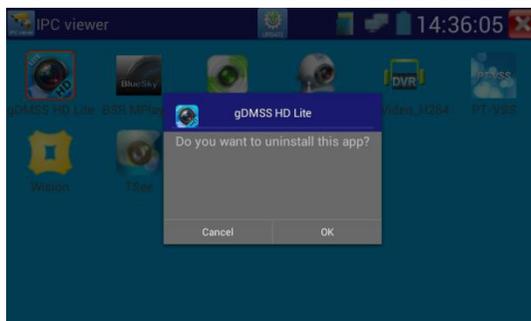
The testers have some camera manufacturers Video Management Software included which can be used to display IP camera image by IP camera viewer. For Northern IP cameras the compatible Video Management software is iVMS-4500.

Click icon “IP camera viewer” to enter, run the Video Management Software of the corresponding IP camera, you can view the image after setting the Video Management Software.

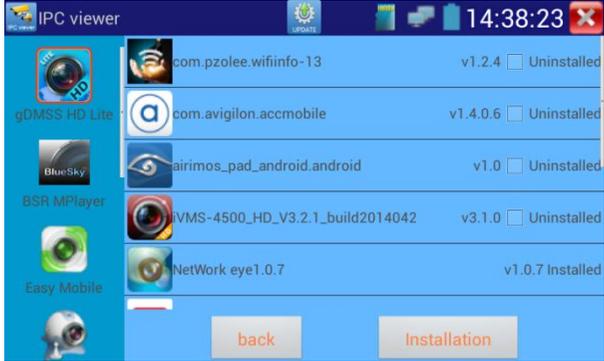
Video Management Software displays IP camera’s image by software decompression, hereby the image may be not clear or fluent.



Click desktop icon several seconds, to uninstall this application



Click the “update” icon in the IPC viewer interface, to update Video Management Software



### 3.3.23 DC12V Power Output

Click the  icon to enter and turn on DC 12V power output interface.



DC12V output power function even when you close the 12V power output interface, it will always display the “12V on”. The 12VDC output will only close if the tester enters sleep status or by click “off” on the interface.

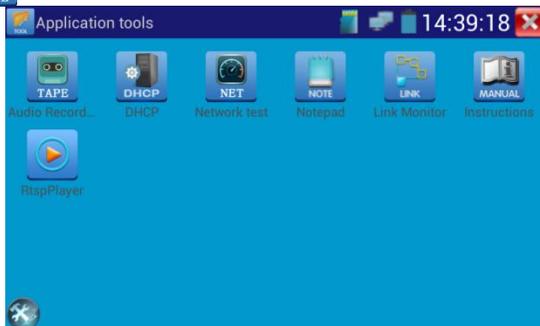


1. Do not input any power into the “DC12V/1A OUTPUT” port of the tester to avoid damaging the tester.
2. Do not output the DC12V/1A power to the DC12V/IN port of the IP camera tester to avoid damaging the tester.
3. The IPC tester power output is close to 1A, if the IP camera’s power is over 2V, the 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. Make sure the tester is full charged or more than 80%, otherwise the tester will shows “low power”, “not able to supply power”

### 3.3.24 Application Tools

It contains Audio record, Network Bandwidth test , DHCP, Notepad, Link Monitor, etc.

Click the  icon to enter.



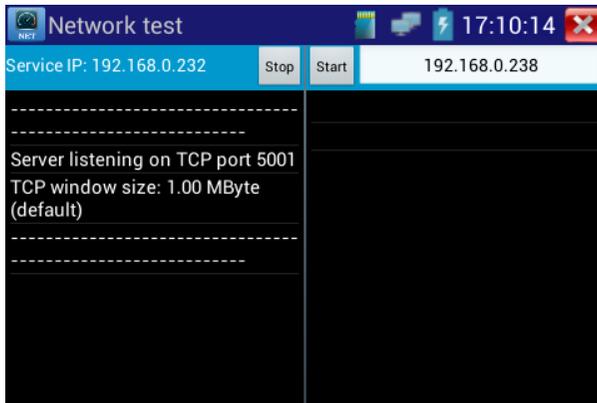
**Audio Record:** Record and play the received audio. Connect the audio device to tester's Audio input port, click the  icon to enter and record, click the red button to stop and prompt to save the recording

**Network Test (Ethernet bandwidth test)**

Built in Ethernet bandwidth test tool for testing Network bandwidth. Tests two devices at the same time, one is Server, the other is Client. Can also upload test software onto a computer and combine with a tester to test.

**Note:** Network test results only used as a reference, For more accurate test, please use a professional Ethernet tester .

Click the  icon to enter.

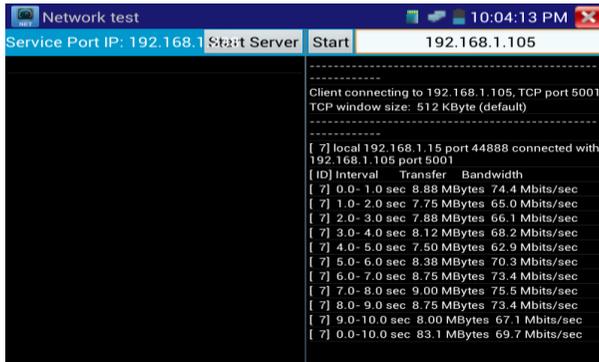


The tester or computer with the Network Test Software installed is the Server, the other device sends packet test. The two testers must be in the same network segment.

1. **Start the Server:** Click “Start the server”, the tester as Server, display its IP address

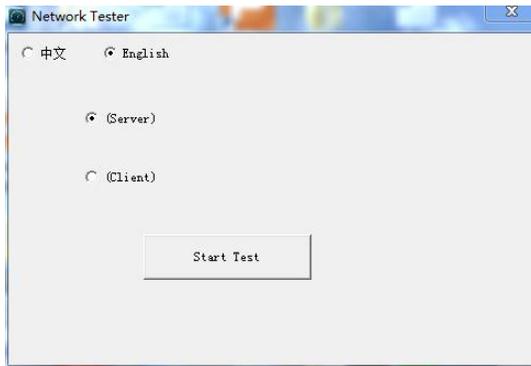


2. **Start Send Packet Test:** Input Server's IP address in other tester, used as a Client, to send packet test ,click button “start test”



Network bandwidth testing, can be tested by a tester and a computer, Install network bandwidth testing software on a computers as a test Client or Server.

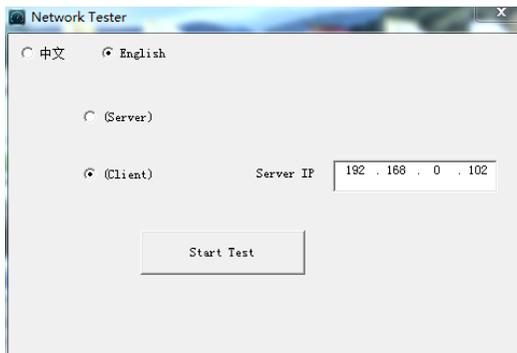
If computer is used as the server, the computer IP address is :192.168.0.89

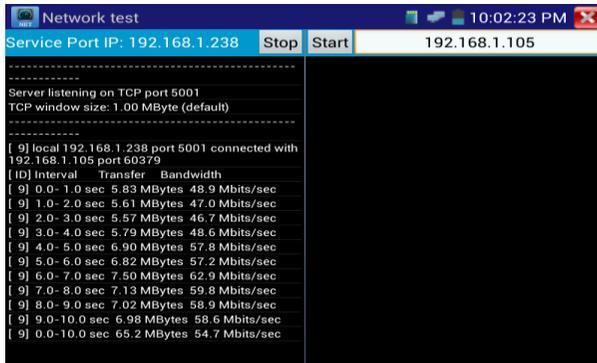


Tester as Client, tester's IP address is:192.168.0.230. The Server and the Client are at the same network segment, but with different IP address. Input Server's IP address 192.168.0.89 in the tester and click "Start" to test network bandwidth.



Or tester as a Server, computer as test Client (select Client, input tester's IP address to test) when tester as Server, shows the following results:

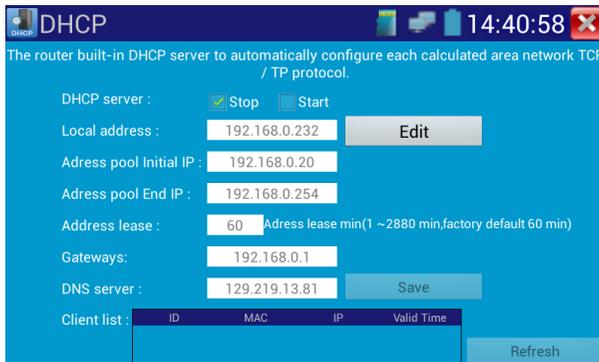




**DHCP Server:**

Start “DHCP” Server, dynamic assign IP address for the IP camera, not need to set IP camera’s static IP address before start the testing.

Select “Start”, set assigned addresses segment, click “save” to assign dynamic IP addresses. Click “Refresh” to check received IP address.



**Notepad:**

Notepad can be used to record testing results, click the key “Save” to save the contents. Notepad can auto record the storage date and time.



Click the  icon to view the notepad . Click each record bar to show the details. Press the record bar for several seconds to delete the file.

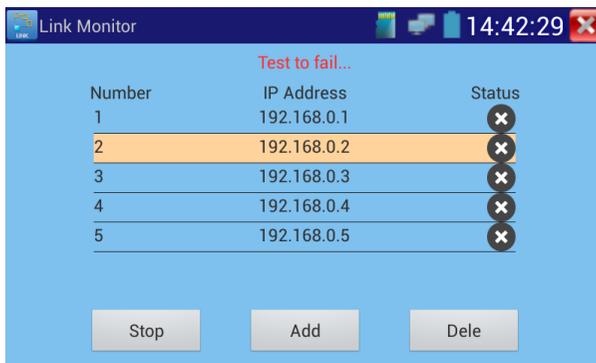


### Link Monitor :



Click the icon to enter, check if the new IP address has already been occupied by other network device. Avoid the new address conflict with other network devices.

Click “Add” to display the testing IP addresses, can add multiple IP addresses, For different network segments’ IP test , click the tester’s “Set” on the main menu to enter its interface, click “IP Settings” to check. Make sure the network segments in Link Monitor and in “IP Settings” are the same .click “start” to test. Check if the device’s IP address is occupied by other device, If the status is “√”, means the IP address is occupied, if the status is “×”, means the IP address is available



### Application:

Add an IP camera or other network device to the current network group, the new IP address must not be occupied, otherwise it will cause IP conflicts and stop the equipment from working properly. Link monitor can check if the new setting IP address is occupied.

### 3.3.25 APPS Tools

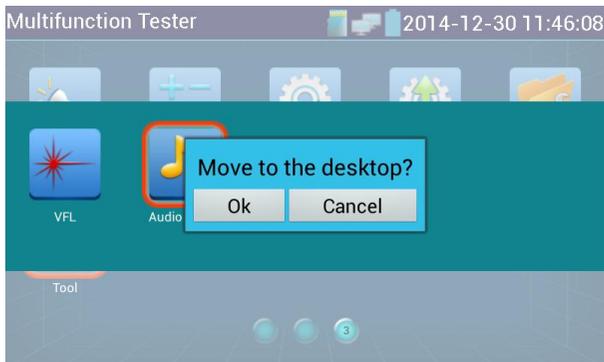
Click the  icon to enter.

User can move desktop Icons into APP Tool. Click the Icon for several seconds, prompts whether to move the icon to APPS tool .



Click icons “APPS” to show all icons. Tapping on the screen outside the APPS interface returns to main menu

Click icon for several seconds, prompts whether move the icon to the main menu.



### 3.3.26 System Set

Click icon  to enter



**Language:** Simplified Chinese, Traditional Chinese, English and others

**Date/Time:** Set the Date/time

**IP setting:** Set the IP address, Subnet Mask, Default Gateway, DNS address

Test multiple network segments' IP, click "Advance", to display IP setting interface, then click "Add" to add new IP address as tester's address to test .



After setting IP address (refer to above photos), the tester can test two network segments IP camera (192.168.0.0) and (192.168.1.0).

**WLAN:** Turn on /off WIFI. After connecting WIFI, double click WIFI to check the connected IP address.



**Version Information:** Check version information for each application

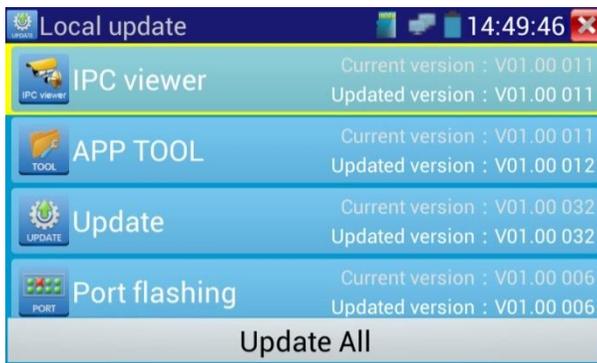
**Screen Rotation:** The LAN slot, PSE IN slot, UTP/SCAN slot etc, are on the downside of the IPC tester. Image 180 degree rotation, is very convenient for the user to upward the downside to connect the LAN cable and do the testing.

**PTZ Address Scan :** Turn on/ off. Before enter “PTZ controller” interface, it need to turn on “PTZ address scan”, otherwise the PTZ controller cannot operate PTZ address scan. Once users stop operation on “PTZ controller” interface, the tester auto shut down “PTZ address scan” to prevent users operate PTZ controller by mistake.

Turn off option: Fast turn off . If select it, the tester will run fast and enter main menu before some data is refreshed or deleted. To avoid unnecessary problems, it is better not to shut off the tester by “Fast turn off”.

### 3.3.27 Update

Click  to enter



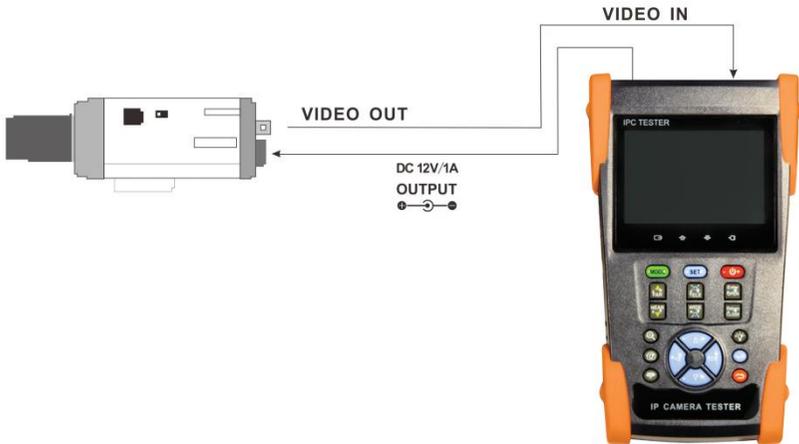
If there are applications for updating, the applications will be displayed on the interface. Click the relevant applications to update to the latest version.

### 3.4 DC12V 1A Power Output

Touch  function ,enters power output interface

“DC12V/1A OUT ”is a power output interface it uses the tester’s battery and requires power convert cable ,the smaller end of the convert cable to connect to DC12V/1A OUTPUT, the other end connect to camera power input interface.

Power output function is mainly used in the field for camera demonstration and testing, meanwhile, for some camera installation sites, if there is no power outlet, the tester can offer temporary power for the camera.



#### Notice:

- DO NOT input any power into the “DC12/1A OUTPUT” port of the IP camera tester to avoid damaging the tester
- The IPC tester power output is close to 1A, if the IP cameras power is over 1A, the tester will auto enter protection mode. . Disconnect all the connections of the tester and then connect the tester with power adaptor to resume use of the tester.
- Make sure the tester is fully charged or the battery icon shows more than 3 bars; otherwise the

tester will show battery power is low and will not be able to offer power output.

### 3.5 Audio test

Test the audio input from pickup devices. Connect the tester and pickup device with the audio cable.

#### Support audio record and storage



## 4. Specifications

### 4.1 General Specifications

Model	IP35TM
Display	3.5 inch Capacitive touch screen , resolution 4800 (RGB) x 320
Network port	10/100M auto adapt, RJ45
TVI camera test	1 channel TVI IN BNC Input ,Support resolution 720p 60fps / 1080p 30fps /1080i 60fps
WIFI	Built in WIFI, speeds150M, display wireless camera image
Supported IP camera type	ONVIF, ACTI, AIPU, APD, AXIS, Aebell, Bestecher, Changying, Colin, Costar, Dahua, DVO, DVSONE, Devele, Etrovision, FOKO, FORSECU, Finetida, GOLBONG, HI-SHARP, HIKVISION, HISIDE, HISOME, HZWS, HanBangGaoKe, Hawkeye, Honeywell, Huisun, ISEC, Infinova, Jetview,

	JOOAN, JOVISION, JUAN, Jbvideo, JieGao, JingShiKang, KEDACOM, KINPUS, Kejun, KumKang, LEFOUND, LILIN, LanDunShiAn, Longse, NBCCT, NJBESTWAY, Neitway, OSKA, PN3D, Panasonic, PengRunDa, Pinshi, QIDUN, SAMSUNG, STJAITU, STYCO, Safer, Seeyou, SongXin, Sunell, TBTEC, TIANDY, TVT, TianLong, TruVue, Uniview, VIDIANET, VVS-CCTV, WAPA, WATCHMAN, WEISKY, Woshida, XiangWei, XinLong, YH, YJX, YSJ, YueTian, ZKTeco, ZLD
Video input/output	1 channel BNC input & 1 channel BNC looped output, NTSC/PAL (Auto adapt)
Video Level Test:	Video signals measured in IRE or mV
Zoom Image	Support Analog camera and IP camera image zoom /move
Snapshot, Video record and playback	Image Screen snapshot, record ,save ,view and record and play back
12V/1A power output	Output DC12V/1A power for camera
Audio test	1 channel audio signal input, test whether sound normal, 1 channel audio signal, to connect headphone
PTZ control	Support RS485 control, Baud 600-115200bps, Compatible with more than 30 protocols such as PELCO-D/P, Samsung, Panasonic, Lilin, Yaan, etc
Video Signal Generator	Output one channel PAL/NTSC color bar video signal for testing monitor or video cable.(red, green ,blue, white and black color )
color bar generator	Local side PC can login the tester, send the signal by network ,test network connection communication whether normal
UTP Cable tester	Test UTP cable connection status and display on the screen. Read the number on the screen
Data monitor	Captures and analyzes the command data from controlling device, also can send hexadecimal
Network test	IP address scan, link test, Ping test, Quickly search the connection IP

	camera and other device's IP address
Cable scan	Search the cable by the audio signal
PoE test	Measurement POE switch or PSE power supply voltage and cable connection status
POWER	
External power supply	DC 5V(1.5A )
Battery	Built-in 3.7V Lithium polymer battery ,.3500mAh
Rechargeable	After charging3~4 hours, normal working time8hours
Parameter	
Operation setting	Capacitive touch screen, OSD menu, Chinese/English
Auto off	1-30 (mins)
General	
Working Temperature	-10℃----+50℃
Working Humidity	30%-90%
Dimension/Weight	194mm x 112mm x 48mm / 540g