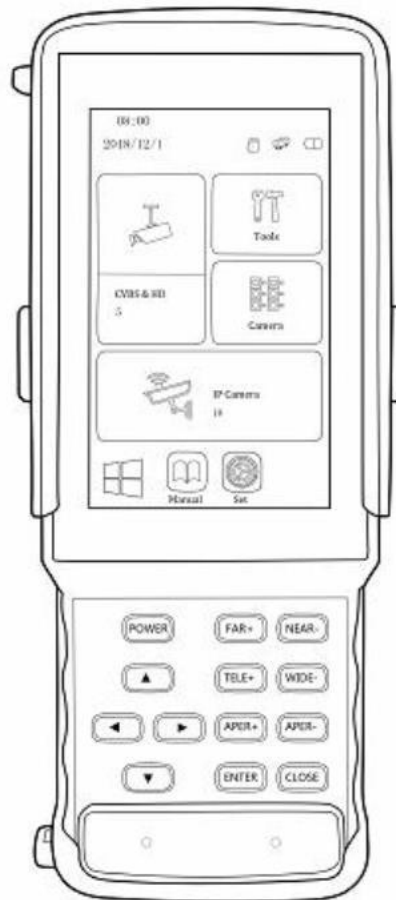


IPC-9310 Series Video Monitor Tester



IPC 9310

Quick Start Manual

Statements

About this manual

This Manual is used for user guiding. Pictures or illustrations in this manual are only used for explaining products and may be slightly different from the real instrument, please take the actual product as the criterion. For the purpose of upgrading products or other needs, the company may change the contents of this manual.

Responsibility statement

- To the maximum extent permitted by law, the products described in this manual (including hardware, software, firmware, etc.) are provided by "present situation" which may be defective, incorrect or malfunctioning. The company does not provide any explicit or implied warranties such as guarantees of marketability, quality satisfaction, suitability for specific purposes, non-infringement of third-party rights, etc. Also, not make compensation for special, incidental or indirect damages caused by the use of this manual or our products, including but not limited to the loss of business profits, data or documents.





- All measurement tools of this instrument may have accuracy errors. The test results are for reference only. The company does not make any commitment to the final test results, and does not assume any legal responsibility for disputes arising from the test results.
- If you disassemble the product privately, you should bear the risk of accidental damage to the product all by yourself, but the company can provide technical support.
- When using this product, please strictly follow the applicable laws. If the product is used to infringe the rights of third parties or other improper uses, the company will not bear any responsibilities.
- If the contents of this manual conflict with applicable laws, please take the law as the criterion.

Preface

The purpose of this section is to ensure that users can use the product correctly through this manual in order to avoid danger or property loss in operation. Before using this product, please read the product manual carefully and keep it properly for future reference.

Symbolic convention

The meanings of symbols in this manual are as below:

Symbolic	Explication
 Description	Descriptive text, represent the addition or interpretation content of main text
 Caution	Reminding text, remind users of some important operations to avoid potential damages or property losses
 Warning	Warning text, indicate potential risks which may cause accidents, equipment damages or business interruptions if not paid attention to
 Danger	Danger warning text, represent high potential risks and may cause injury or death if not paid attention to

Cautions for safety use

Warning

- In the process of installation and use of the product, you must strictly observe local electrical safety regulations.
- Please use original power charger provided for the instrument and 9V laminated batteries provided by regular manufacturers for cable tracker.
- Do not let the product get wet or rained.

- If the product doesn't work properly, please contact the store or service center where the product is purchased. Do not disassemble or change the product in any way (the company will not bear any responsibilities for problems caused by unauthorized change or repair).



Notice

- Avoid placing products in vibration or shock environments and keep products away from EMI sites.

- Do not use the product in extremely hot, cold or humid environment, detailed temperature and humidity requirements please refer to product parameter table.

- Equipment should be stored in dry and non-corrosive gas environment to avoid direct sunlight.

- This product is a weak current equipment. All peripheral interfaces should not be connected to cables with strong current.

- UTP Cable tracking port can not connect over DC 60V PoE switch.

- Please do not use the instrument while charging or it may shorten the battery life.

- This instrument is designed for security projects debugging, please do not use for entertainment.



Description

Quality requirements for operators: Basic knowledge and operation skills in low voltage cabling and low voltage electronic wiring, be able to understand the contents of this manual.

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Chapter 1. Product Description

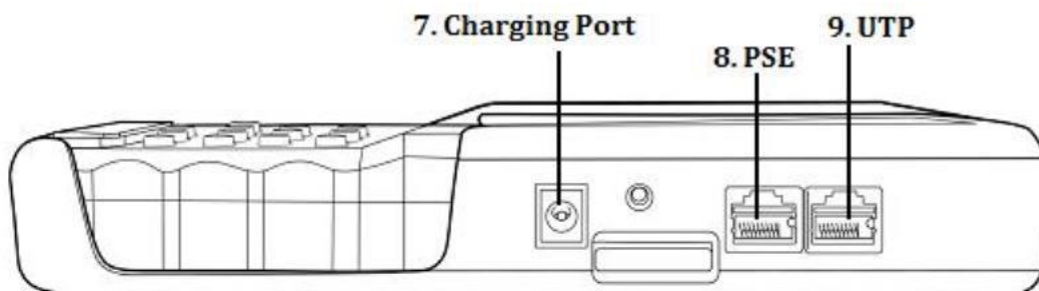
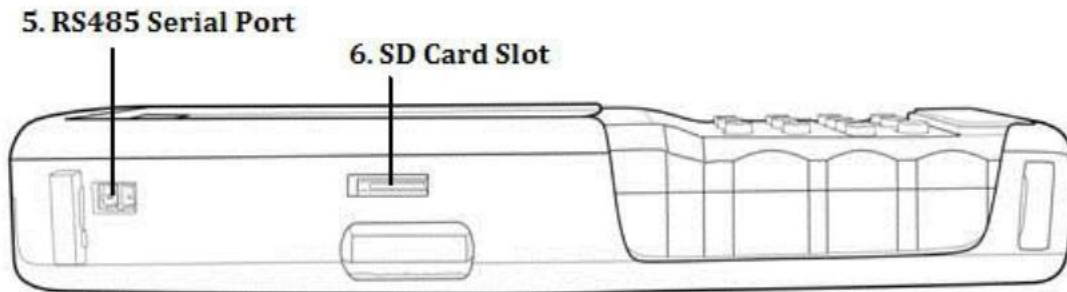
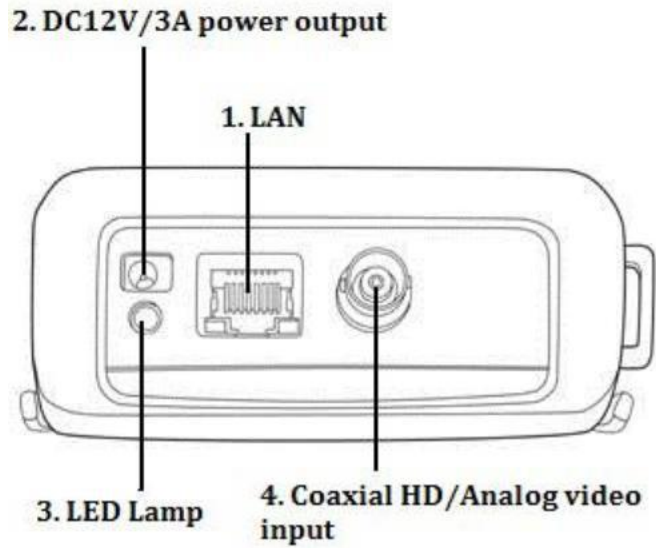
The instrument adopts a smart operation system, mainly used for the installation and maintenance of network monitoring cameras, analog video monitor cameras and other security monitoring equipments, the instrument adopts a 4-inch HD IPS full view display screen, can clearly display the IP and analog camera video images. It is built in a variety of network tools including PING, IP address scan, and standard PoE power output, DC12V/3A power output, it is an essential tool for security monitoring projects and integrated wiring projects.

1.1 Parameter table

Product Model	IPC9310 HD Video Monitor Tester
Touch Screen	4 inch capacitive touch screen
LCD Screen	4 inch resolution 800 × 480 IPS HD full view
Ethernet Port	10/100/1000M adaptive
WIFI	Built-in wireless WIFI, speed 150M
H.265 Mainstream test	Support H.265 mainstream display camera video, resolution up to 4K
IP Camera test	ONVIF (support PTZ operation), major camera brand IPC tool customization, display video by private protocols, almost support all brand cameras in the market
CVBS Analog Camera test	1 channel CVBS analog signal input, support PAL/NTSC format adaptation
Lens Simulation	Simulate '2.8/3.6/4/6/8/12/16/25mm' lens image display area
Focus Information test	Camera focus information and image quality test
IP Discovery	Full network segment IP scan to discover camera IP addresses
HIKVISION SADP tool	HIKVISION camera batch activation, batch IP modification, be able to modify username and password

Dahua test tool	Dahua camera batch activation, batch IP modification, cross network segment IP modification, modify username and password
Coax HD Camera test	Support HD TVI 8MP resolution 3840 X 2156 15P Support HD CVI 8MP resolution 3840 X 2156 15P Support HD AHD 5MP resolution 2560 X 1920 15P
PoE Power Output	48V standard PoE output, max 25.5W
Photo, Video and Playback	Support all camera videos photo taking, video recording and stored as H264 format
PSE Voltage test	Display PoE power supply device voltage and circuit conditions
Cable TDR Quality test	Test network cable pair connection status, length, attenuation, quality, impedance, delay deviation parameters, etc
UTP Cable test	Test any 2 cable core connection sequence and on-off status
PTZ Control	Support Pelco-D/P, Samsung, Panasonic, etc. more than 30 protocols
DC12V Power Output	DC12V power output, max current 3A, provide temporary power for cameras
RS485 Serial Port tool	Send or receive any data and hex data
Power Charger	DC 12V/2A input, 3-4 hours to fully charge the battery
Battery	Built-in 7.4V polymer lithium battery, capacity 3200mAh, can work continually for 8-10 hours
Language	Chinese Simplified, Chinese Traditional, English, Russian, etc. more than 10 languages
Internal SD Storage	8G
Working Temperature	-10°C--+50°C
Working Humidity	30%--90%
External Size	230mm×103mm×38mm
Weight	0.5kg

1.2 Port description



Instrument port description:

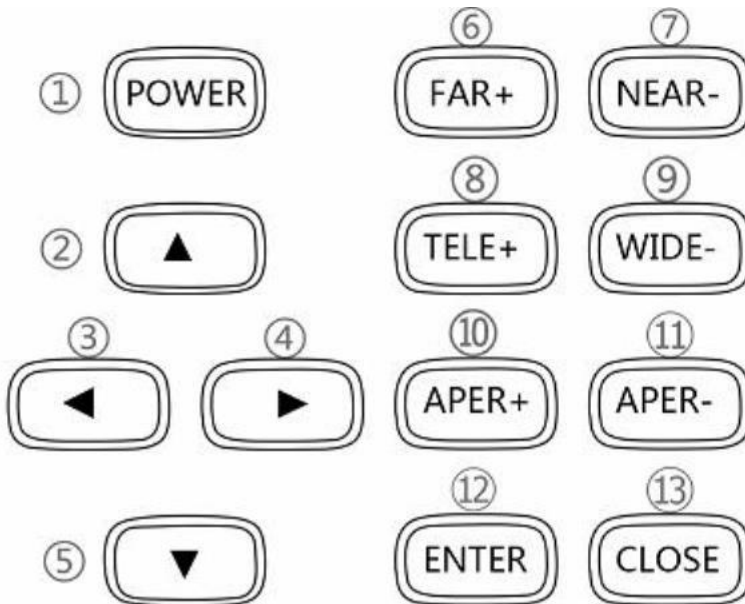
1. LAN Port: Ethernet port, IPC camera connection port, POE power output port, PSE voltage input test port, used to connect Ethernet, camera and test POE power, etc
2. DC 12V/3A Output: Output 12V/3A temporary power for camera use
3. LED Lamp: Used as flashlight in dark area
4. Coax HD/Analog Video input: Used to connect analog camera and coaxial HD camera
5. RS485Serial Port: Receive, send and analyze data, used for PTZ protocol analysis, etc
6. SD Card Slot: Place SD card to extend storage
7. Charging Port: Instrument battery charging
8. PSE: PSE device power input and test
9. UTP: Unshielded twisted pair cable test port



Warning: Not allowed connections of this instrument are as below:

1. All ports are not allowed to connect strong current devices, or the instrument may be burnt out.
2. When using UTP port to perform 'Cable test' function, the other end is only allowed to connect the blue cable test box or the port on cable tracker signal receiver.
3. All ports are not allowed to short circuit connect, or the instrument may be burnt out.
4. Do not use a non-original charger to charge the instrument.

1.3 Button description



1. Power button, long press 2 seconds to boot, short press to sleep. Press 2 seconds to popup shutdown dialog when powered on, press 5 seconds to force the shutdown

2. Select cursor or menu up shift operation

3. Select cursor or menu left shift operation

4. Select cursor or menu right shift operation

5. Select cursor or menu down shift operation

6. FAR+, PTZ focusing + operation

7. NEAR-, PTZ focusing – operating

8. TELE+, PTZ zoom + operation

9. WIDE-, PTZ zoom – operation

10. APER+, PTZ aperture + operation (long press 3 seconds to screenshot quickly, screenshot is forbidden in some apps, this function can be open or close in set->Key set)

11. APER- , PTZ aperture – operation

12. ENTER, confirm button, used for confirming operation

13. CLOSE, exit button, used for exiting to previous operation

Chapter 2. Operation Guide

2.1 System desktop

This instrument uses smart operation system, ensure that the lithium battery is installed correctly and has enough power, press the power button for 2 seconds to boot, waiting for system boot completion, then you enter the system desktop main menu, as shown in Figure 1

1) The upper right status bar icons represent the SD card status, network connection status, battery level, the upper left icons represent the current time and date, as shown in Figure 1



Figure 1 System Desktop


2) Directly touch the icon  in the lower left corner of Figure 1 to list all software in the system, slide left or right to view more applications, as shown in Figure 2



Figure 2

2.2 CVBS Analog Video Input Test

1) In the CVBS & HD main menu, touch CVBS icon to enter the application main interface, as shown in Figure 3



Figure 3 CVBS Analog Video Test Main Interface

2) When connecting analog video signal to CVBS input port, it can display analog video image and format directly, as shown in Figure 4

Operation Instructions:

- 1. Connect analog camera to the instrument CVBS port via BNC video cable**
- 2. Connect analog camera power**
- 3. Touch ‘CVBS’ icon to enter the App to view video image**



Figure 4 Video Image When Connecting Analog Camera

Operation Options:

1) Photo taking: touch the Snap icon to take photos, touch Photo icon to view the photos you just took.

2) Video recording: touch the Record icon to start recording, touch it again to end the recording, videos are stored as H264 format file, you can touch Playback icon to watch the video.

3) PTZ operation: select the PTZ button on the bottom center to turn on touch PTZ control, you can also use physical button to control, touch the PTZ icon, PTZ setting menu will popup, by this menu you can set PTZ protocol, port, baud rate, address, horizontal speed, vertical speed, preset position parameters, after setting touch ‘OK’ to finish operation, as shown in Figure 5

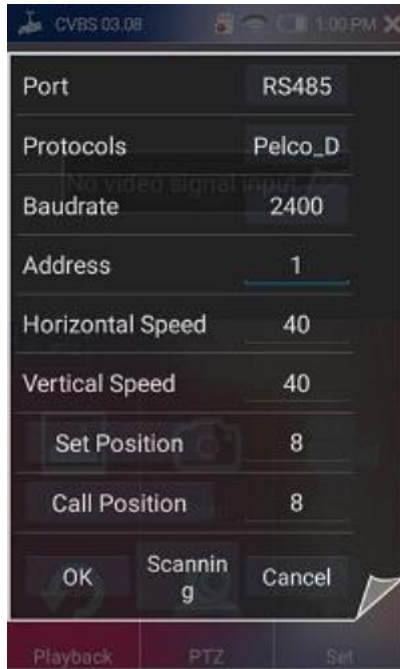


Figure 5

4) Image zooming operation:

Select the PTZ icon on the bottom to enable PTZ function, disable PTZ function to zoom or move image freely through gestures, the image can be enlarged max 8 times, as shown in Figure 6

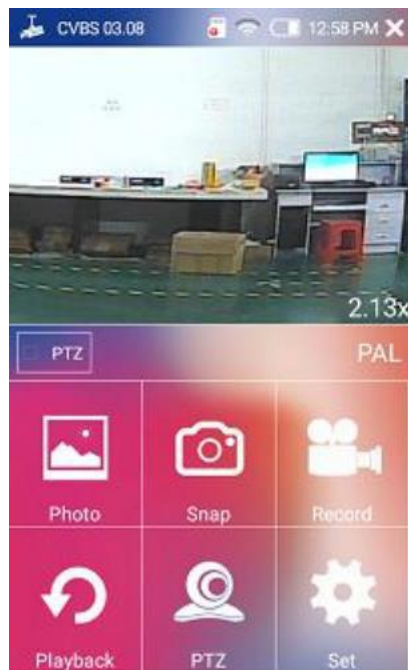


Figure 6

5) Full screen operation:

In the image display area, quickly touch the screen twice to enter full-screen mode, touch the screen twice again to exit full-screen mode, as shown in Figure 7



Figure 7

2.3 IP-Discovery

IP-Discovery works as a router, can identify camera IP directly even you do not know the camera IP. With this function, you can discover camera IP and jump to ONVIF to view camera video directly, as shown in Figure 8

IP discovery function may be slightly different depending on different camera brands, for specific cameras, users need to summarize after trying, major operations are as below:

- The first type: Enter IP-Discovery first, then connect camera to LAN, waiting no more than 2 minutes to discover the camera IP.
- The second type: Enter IP-Discovery first, then connect camera to LAN, then supply power for camera, waiting no more than 3 minutes to discover the camera IP.
- The third type: Connect camera to LAN, then enter IP-Discovery, this method is not recommended, because some cameras need to wait a long time or cannot be discovered.

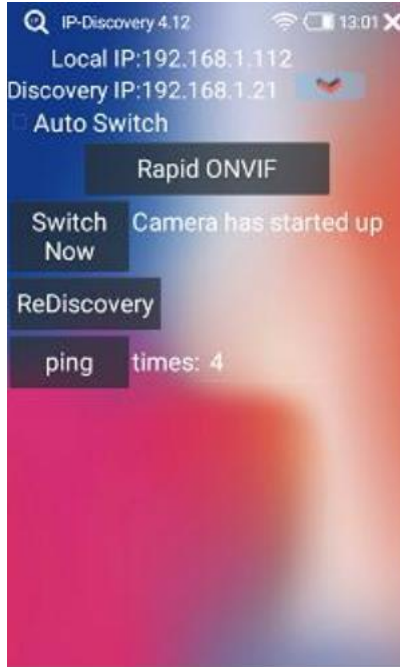


Figure 8

2) You can choose which App to jump to play camera video by long pressing Rapid ONVIF button, as shown in Figure 9

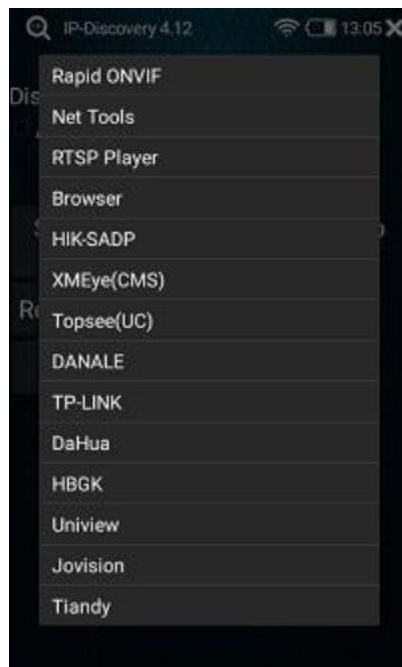


Figure 9

3) Application settings, you can touch the App icon on top left to set, as shown in Figure 10



Figure 10

2.4 Rapid ONVIF

1) Rapid ONVIF function enables you to view IP camera video quickly, as long as the camera IP and the instrument IP are in the same network segment and the camera supports ONVIF protocol, it can locate and play camera video quickly, after scanning for 1-2 seconds, for cameras do not require authentication, you can view the video image by touching the camera directly, for cameras that require authentication, input username and password to log in and view the image, as shown in Figure 11



Figure 11

2) Select the camera to operate, touch to view camera video directly, operation options are as shown in Figure 12-1, 12-2, 12-3



Figure 12-1



Figure 12-2

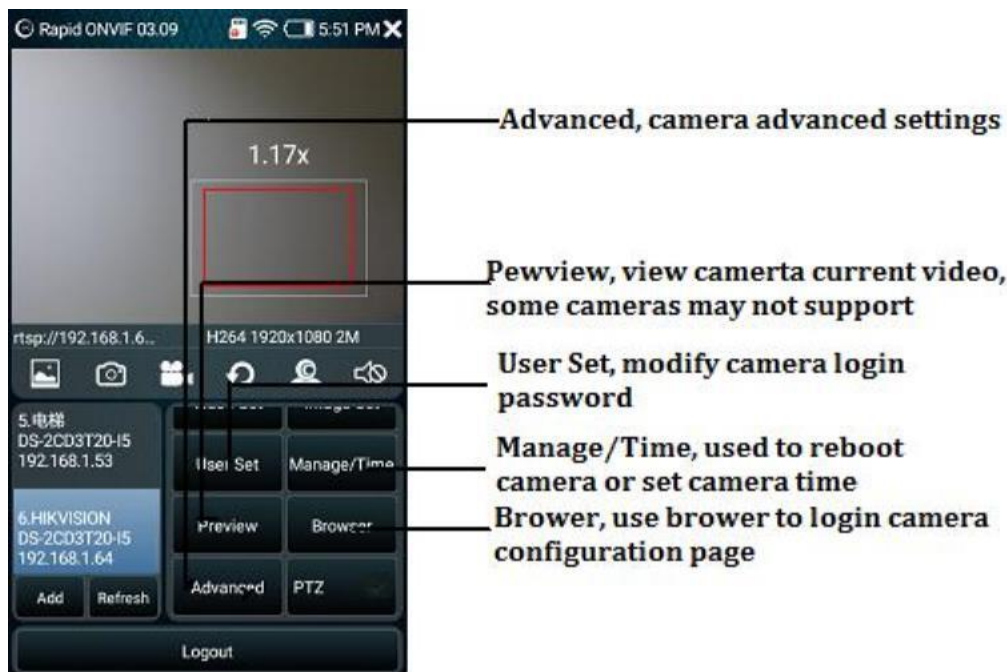


Figure 12-3

3) Photo taking, video recording, playback, full screen operation and image zooming functions please refer to CVBS analog video operation part.

4) Channel name setting, Touch 'info' button under the ONVIF interface, touch 'OSD' button at the bottom of this page to popup channel name, date time editing dialog, if you cannot edit on this page, please go to corresponding camera client to operate, if there are no corresponding client, please use the browser to login camera configuration page to edit the value.

2.5 RTSP player

RTSP player can play RTSP network video stream directly, touch RTSP icon, input camera IP address or camera RTSP address to play the video stream directly.

2.6 Network tools

1) IP address scan function can not only scan out all IP addresses in LAN, but also identify whether it is a camera IP, input Beginning and End IP, touch the 'Scan IP' icon to start, if there is a camera icon behind the IP, it means it is a camera IP, if there is a camera icon and a question mark behind the IP, it means it may be a camera IP, this function helps you to locate camera IP addresses in LAN quickly, as shown in Figure 13



Figure 13

2) PING Tool: Touch 'Ping' icon to check current network conditions and PING value, you can use PING to debug network conveniently, input 'Remote IP', 'Send Num' and 'Send size' (send size can use default value), touch 'Start' button to perform this operation, as shown in Figure 14



Figure 14

3) DHCP service enables you to assign IP address automatically for cameras which are in IP address automatic acquisition mode, touch 'DHCP' icon to enter the DHCP operation interface, as shown in Figure 15.

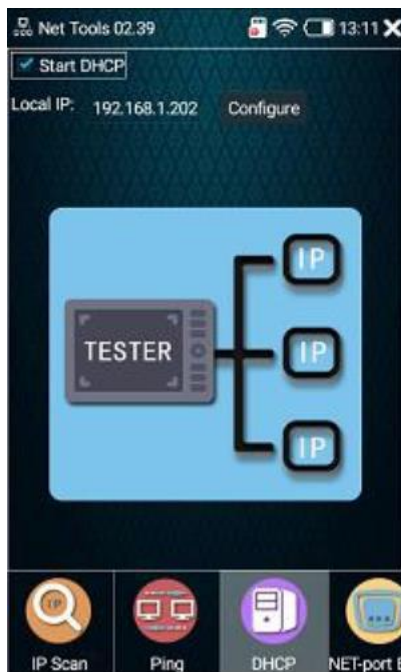


Figure 15

4) NET-port Blink function: Connect one end of the cable to LAN port, touch 'Start' button then you can see the port on network device blink regularly, it's easy to find the other end of a cable by this function, as shown in Figure 16

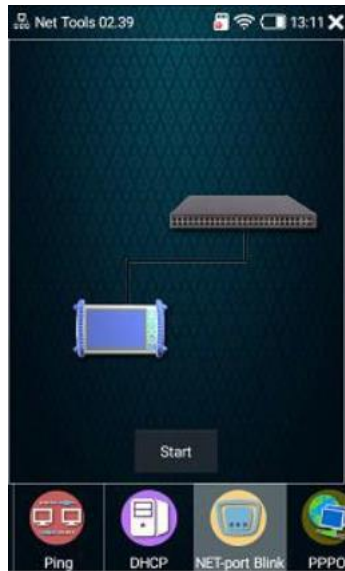


Figure 16

5) For other network tools, please touch the corresponding icon to use

2.7 Network cable test

Touch 'Cable test' App to enter network cable test function main interface, as shown in Figure 17

Operation Instructions:

1. Connect one end of network cable to instrument UTP port, the other end to cable test box or the port on cable tracker signal receiver
2. Touch 'Cable test'App to enter network testing interface



Figure 17

2.8 POE power output


POE power output function can supply 48V temporary power for cameras that support POE power function. Touch 'PoE POWER' icon to enter POE power control function

Operation Instructions:

1. Touch to enter PoE POWER App, touch 'ON' to start 48V power output
2. Connect the camera that support POE power to instrument LAN port
3. Network cable 1,2,3,6 will supply 48V power for cameras



Figure 18

 **Warning:** Before using this function, please make sure the camera support POE power, if not, please do not connect the camera, it may cause camera failure or damage and other unpredictable consequences.

2.9 RS485 serial tool

RS485 tool can accept, send and analyze RS485 port data. It can be used to analyze PTZ protocols. Touch 'Series' icon to enter the serial port function interface, you can set Baud rate, Data bit, Parity bit and Stop bit, you can set the data type to

character or HEX to display and send. Touch 'Clr Recv' or 'Clr Send' to clear the screen, as shown in Figure 19

Operation Instructions:

1. Connect RS485 cable to RS485 port, crocodile clamp to device, be careful the port has positive and negative distinction, do not connect incorrectly.
2. Touch 'Serial' icon to enter App to test



Figure 19

2.10 Coaxial HD function

AHD, TVI, CVI coaxial HD max resolution:

HIKVISION TVI coaxial HD max 8MP resolution 3840X2156 15P

DAHUA CVI coaxial HD max 8MP resolution 3840X2156 15P

AHD coaxial HD max 5MP resolution 2560X1920 15P

2.11 Network Cable TDR Test

Network cable TDR test function can display cable length, attenuation, quality, reflectivity, impedance parameters, etc. Touch 'Cable TDR test' icon to enter this App,

Cable TDR test requires cable length 2-195 meters, accuracy error range $\pm 1.2\%$,

to read the attenuation value, there is a requirement for cable length, please refer to the instructions below, you can set measurement unit, it has a built-in connection diagram, cable sequence diagram, help text, it is able to generate test report, as shown in Figure 20

Operation Instructions:

1. Connect network cable to LAN port then you can view cable status and length data, if no value is measured, keep the other end from any devices away and try again
2. To test attenuation value, the cable length should be more than 10m
3. Reflectivity, impedance parameter can be tested only when communicating to cameras

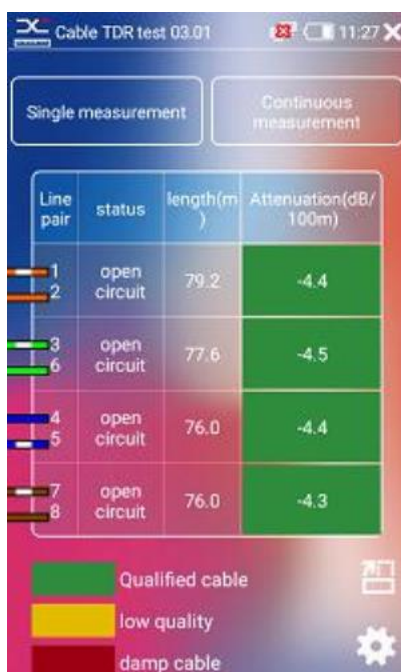


Figure 20

2.12 File management

1) File management function enables you to perform copy, move, rename or other operations for internal storage and external SD card files conveniently, when the instrument is connected to LAN, FTP function is also available, you can perform file operations directly on computer instead of pulling out SD card. Touch 'Explorer' icon

to enter this App, as shown in Figure 21

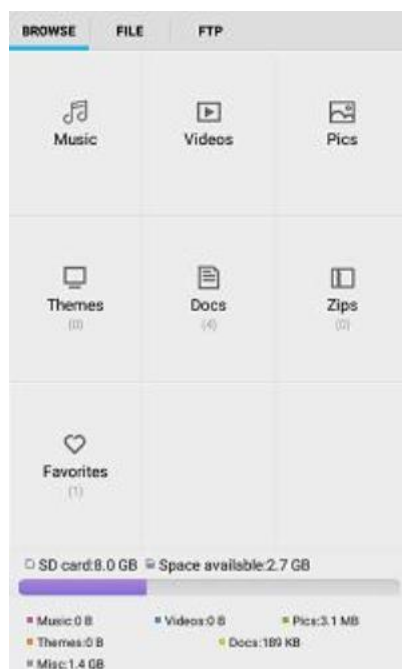


Figure 21

2) Remote management: when the instrument is connected to LAN, you can use the remote management function, touch 'Start Service' button to turn on the remote FTP service, after starting FTP, click 'my computer' on PC and input ftp address to enter the instrument internal or external SD card storage, it's convenient to copy or delete files, no need to remove SD card, as shown in Figure 22



Figure 22

2.13 Browser

1) Browser function enables user to access the IPC camera directly through web page, touch the 'Browser' icon to enter browser function, input camera IP address directly in address bar to open the camera web page, as shown in Figure 23 (notice: all IPC testers in the market do not support installing plug-ins for browser).

Take HIKVISION IP camera as an example, input HIKVISION camera IP to open the following page.



Figure 23

2) Input camera username and password to login to camera web configuration page to modify IP and other parameters directly, as shown in Figure 24



Figure 24

2.14 Upgrade center

Upgrade center is used for application management, you can install or uninstall Apps here, it supports to connect remote server to install online or install locally.

1) Management: you can view application version, the number under App name is current version number, touch the App to jump to corresponding manual, as shown in Figure 25



Figure 25

2) Online installation, touch 'Online' button, the instrument will connect to server and check if there are any Apps need to upgrade, as shown in Figure 26



Figure 26

3) Local installation, touch 'Local File', the instrument will scan internal storage, SD card and U disk to look for installable software packages, long press corresponding Apps to delete application file, as shown in Figure 27



Figure 27

2.15 Settings

System setting function can set instrument parameters such as network parameter, WIFI, time, backlight brightness, volume, sleep time, languages, etc. you can also view the instrument system version information. Touch the 'Set' icon to enter system setting function

1) Ethernet Settings: touch 'Ethernet' icon on the left bar, select 'use Ethernet' column, connect a network cable to instrument LAN port, the instrument can be set to static IP or dynamic IP mode, if you want to use static IP, select 'Use static IP' column, then set the instrument IP address, gateway, subnet mask, primary DNS and alternate DNS items. **By default, the instrument uses static IP address 192.168.1.88, gateway is 192.168.1.1, subnet mask is 255.255.255.0, primary DNS is 114.114.114.114 and alternate DNS is 8.8.8.8,** as shown in Figure 28




Figure 28

2) If you need to set instrument IP, touch 'IP address' to edit, you can also touch the icon on bottom center to set quickly, as shown in Figure 29



Figure 29

3) WLAN Settings

 **Notice:** Please pull out the network cable first if you want to use WIFI, or the instrument will use Ethernet by default

 **Notice:** WIFI hotspot and WIFI cannot be used at the same time

4) Date and time settings

In the setting function interface, select 'date and time' to set the current date and time. when you select automatically determining date time and time zone option, the instrument needs to be connected to Internet, in this case, the instrument will update automatically from Internet, no need to set manually. When these two options are cancelled, you can set the date and time manually.

5) Backlight brightness and sleep time setting

Select 'display' button in the setting function interface, you can set brightness and sleep time. you can adjust screen brightness by sliding brightness bar, select standby sleep time to set sleep time directly, it varies form 30 seconds to 30 minutes.

6) Volume adjustment

In the setting interface select the sound icon to adjust volume, slide sound bar directly to adjust the volume.

7) Storage setting

Storage setting function enables you to view the current internal storage space and available capacity, as well as external SD card storage, and you can set photo taking, video or sound recording default storage path to internal or external SD card.

When the SD card is selected to use, the storage path is the external SD card, otherwise the internal SD card.

8) Language setting

The instrument language can be set to Chinese Simplified, Chinese Traditional, English and so on. Select the language icon in the setting interface to set.

9) Timed shutdown

The instrument can be set to timed shutdown or not, to enable timed shutdown, touch shutdown icon in the setting interface, select a time and it will shut down automatically after dormancy for the time.

10) Instrument information

Select 'about the instrument' button in the setting interface, you can view the instrument version, serial number, instrument hardware version, system software version information.

11) Key set

In the setting interface, select 'key set' icon and you can enable Button mouse mode, users can control the mouse direction by physical buttons and perform zooming, focusing or multiplying operations by corresponding button, this function enables you to use the instrument when touch screen is broken.

2.16 PSE voltage test

PSE voltage test enables you to test the POE network cable port power voltage and power supply cable sequence, touch 'PSE' icon to enter this App function, as shown in Figure 31

Operation Instructions:

1. Use one network cable to connect switch with instrument PSE IN port, be careful do not turn on instrument POE power.

2. Use another network cable to connect instrument LAN port with a camera which support POE power, notice that the camera must support POE power or it will cause test failure (if you are testing a non-standard PSE, skip this step).

3. Touch 'PSE'App icon then you can see the power supply voltage of cable 1,2 is 46V

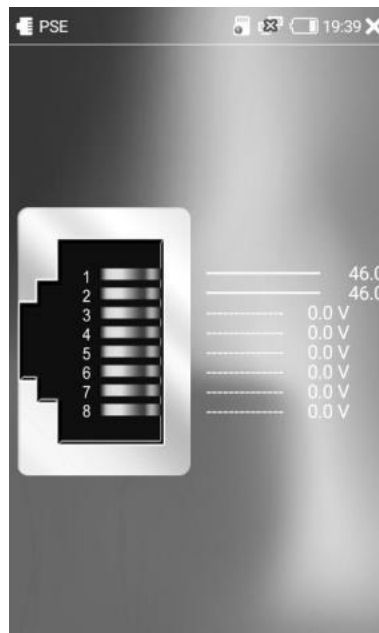


Figure 30

Chapter 3. After-sales Service

To our users:

With your trust and support, in order to protect your interests and make you get better quality service, our company make the following commitments:

1. Product warranty: all products sold by our company enjoy a 2-year warranty service. During maintenance we support spare machine for customer use (except for the damage or failure caused by man-made factors or irresistible natural phenomena). When the warranty expires, we provide paid service (charge a fee).

2. After-sales technical service: we provide timely, comprehensive technical and business consultation, comprehensive technical information and data, lifetime free technical support and using guidance service. Users can inquire technical issues and get a clear solution through after-sales phone.

3. When performance problem occurs in normal use, our company promises the above warranty service. In addition, our company will comply with relevant laws and regulations that the state clearly defined.

4. During the warranty period, paid maintenance service will be implemented in the following situations:

- (1) Damage caused by man-made factors or irresistible natural phenomena;
- (2) Damage or failure caused by improper operations;
- (3) Damage or failure caused by transformation, decomposition, assembly of the product.

Let the world have no difficult projects