



IPC TESTER

NF-IPC725



Statement

About This Manual

This manual is intended as a user guide. The photos, illustrations, icons and figures in this manual are provided only for explanation and reference. Due to product or firmware updates, the content may differ from your actual device. If you need the latest version of this manual, please contact your instrument supplier to obtain the electronic file.

Liability Disclaimer

To the maximum extent permitted by applicable law, the product described in this manual (including hardware, software and firmware) is provided “as is”. The company makes no express or implied warranties, including but not limited to merchantability, satisfactory quality, fitness for a particular purpose, or non-infringement. The company shall not be liable for any direct, indirect, incidental or consequential losses resulting from the use of this manual or the product, including but not limited to commercial loss, data loss, or document loss.

If you disassemble the product privately, you assume the risk of accidental damage. The company may provide relevant technical support, but is not responsible for losses caused by improper disassembly.

When using this product, strictly comply with applicable laws. The company assumes no responsibility for any improper use, including infringement of third-party rights or illegal activities.

All measuring tools in this instrument may have accuracy errors. Test results are for reference only. Our company makes no commitment to the final test results and assumes no legal responsibility for any disputes arising from the test results.

If the content of this manual conflicts with applicable laws and regulations, the laws and regulations shall prevail.

Preface

The purpose of this manual is to help users correctly operate the product and avoid potential risks or property damage during operation. Please read this manual carefully before using the product and keep it for future reference.

Symbols and Conventions

The symbols appearing in the document are explained below.

Symbol	Description
 Info	Supplementary information, corrections and explanations of the text.
 Caution	Reminds the user of important operating instructions or potential injury/property damage risks.
 Warning	Indicates a potential risk which, if not avoided, may result in injury, equipment damage, or service interruption.
 Danger	Indicates a high potential risk which, if not avoided, may cause serious injury or death.

Safety Precautions

- During installation and use, strictly comply with electrical safety regulations of the country/region of use.
- Use only the charger provided by the company.
- Do not expose the product to rain, moisture, or water.If the product does not work properly, contact the dealer or service center. Do not disassemble or repair the product yourself. (The company is not responsible for issues caused by unauthorized repair or modification.)
- Avoid placing the product in a vibrating or impact environment, and keep it away from strong electromagnetic interference.
- Do not use the product in extremely hot/cold or high-humidity environments. Refer to the specification table for requirements.
- Store the device in a dry, non-corrosive environment. Avoid direct sunlight.
- This product is a rechargeable device. Make sure all external cables are connected correctly before use.

- The UTP test port must not be connected to AC power devices or non-standard PoE switches with output exceeding DC 50 V.
- It is recommended not to use the device when the battery is completely depleted, to extend battery life.
- This product is an engineering test instrument and is not recommended for entertainment purposes.
- Operator requirement: Users should have basic knowledge and operating skills for low-voltage wiring and low-voltage electronic circuit connection, and be able to understand this manual.

Table of Contents

1.Product Overview.....	01
1.1 Technical Specifications.....	01
1.2 Appearance and Interface Description.....	03
2.Operation Guide.....	04
2.1 System Desktop.....	05
2.2 Analog Video (CVBS).....	07
2.3 IP Camera: IP Scan & One-Key Video.....	10
2.4 Quick ONVIF / ONVIF-XVR.....	12
2.5 Hikvision SADP.....	19
2.6 RTSP Player.....	20
2.7 Network Tools.....	21
2.8 Power Management.....	23
2.9 RS485 Serial Port Tool.....	24
2.10 File Manager.....	24
2.11 Browser.....	25
2.12 Upgrade Center.....	27
2.13 Settings.....	29
2.14 Network Cable Test.....	32
2.15 Cable TDR Test.....	33

Chapter 1 Product Overview

This instrument runs on an Android operating system. It is mainly used for installation and maintenance of network cameras, analog video surveillance cameras, and other security monitoring equipment. The tester is equipped with a 5.5-inch high-definition IPS full-view display to clearly show network and analog camera images. It integrates common network tools, PoE power output, DC 12 V output, cable testing and other functions, making it an essential tool for security engineering and integrated wiring projects.

When you receive the tester for the first time, please check that the package, accessories and appearance are complete.

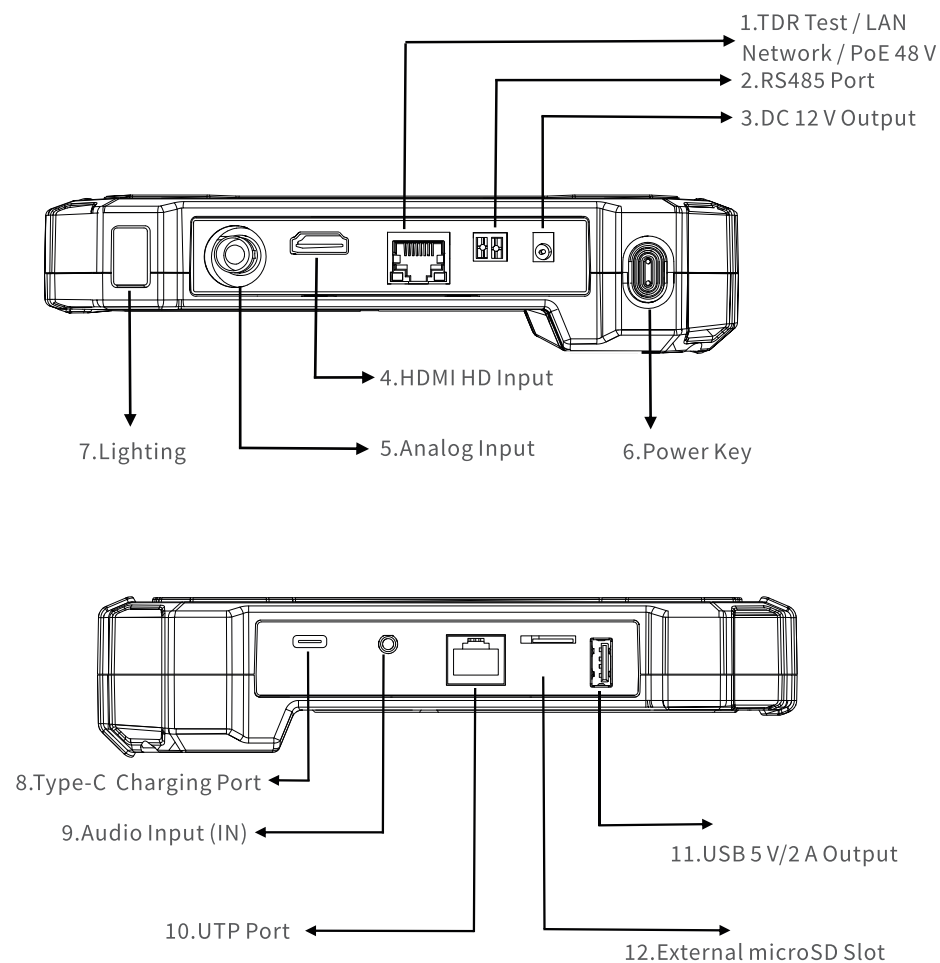
1.1 Technical Specifications

Product Name	IPC Tester
Touch Panel	5.5" G+G structured capacitive touch panel
LCD screen	5.5" IPS, Resolution 1920×1080, wide viewing angle
Ethernet Port	10/100/1000 Mbps adaptive
WIFI	Built-in Wi-Fi, up to 150 Mbps
IP Camera Test	Supports ONVIF tools and multiple manufacturers (e.g., Dahua, Hikvision, ACTi, Samsung, etc.); customizable. Supports installing camera client apps; supports up to 8K resolution real-time preview without lag.
Video Image Zoom	Real-time zoom for HD video, up to 5×
Snapshot / Recording / Playback	Supported for all video images
Audio Test	Single-channel audio input test; recording and saving supported
PTZ Control	Supports Pelco-D/P, Samsung, Panasonic and 30+ protocols
DC 12 V Power Output	12 V direct output, max current 3 A (temporary power for cameras)
PoE Power Output	48 V standard PoE output to power PoE cameras
RS485 Tool	Receives and sends arbitrary data or hexadecimal data
DC 5V Output	Provides temporary power (up to 2A) for USB-powered cameras, or serves as an emergency power source for mobile phones.
Charger	Type-C charging, 5 V/2 A, charging time approx 4 hours

Battery	3200mAh- 7.4 V lithium battery, 3200 mAh
Languages	Multiple languages including Simplified Chinese, Traditional Chinese, Russian, English, etc. (10+ languages)
Internal Storage	8G
Operating Temperature	-10°C~+50°C
Operating Humidity	30%~90%
Dimensions	20cmx11cmx4.5cm
Weight	0.5kg

1.2 Appearance and Interface Description

Note: This tester supports optional modules. Only instruments purchased with the corresponding function modules will have the related interfaces (subject to the actual instrument received).



1.TDR Test / LAN Network / PoE 48 V (combined port; used for network connection, PoE output, and TDR tests).

2.RS485 Port : data receiving/sending and PTZ protocol analysis.

3.DC 12 V Output : 12 V/3 A temporary power output.

4.HDMI HD Input : HDMI video input test.

5.Analog Input : analog camera input.

6.Power Key

7.Lighting.

8.Type-C Charging Port.

9.Audio Input (IN).

10.UTP Port.

11.USB 5 V/2 A Output / Input: power output for charging; can connect USB flash drive.

12.External micro SD Slot.

Warnings (prohibited connections/operations):

1.Do not connect any tester port to powered equipment; otherwise the tester may be damaged.

2.The UTP test port must not be connected to equipment with static voltage greater than DC 60 V, and must not be connected to AC power devices.

3.During network cable tests, only connect the test box; do not connect any other devices.

4.Do not short-circuit any port; otherwise the tester may be damaged.

5.Do not charge the tester with non-original chargers.

Chapter 2 Operation Guide

2.1 System Desktop

The tester uses an intelligent operating system. After confirming that the battery is installed correctly and has power, press and hold the power key for 2 seconds to power on. After the system starts, you will enter the desktop interface.

(See Figure 1.)

Desktop operation overview:

1) The status bar icons in the upper right indicate the SD card status, network connection status, and battery level. The upper left shows the time and date. (See Figure 1.)

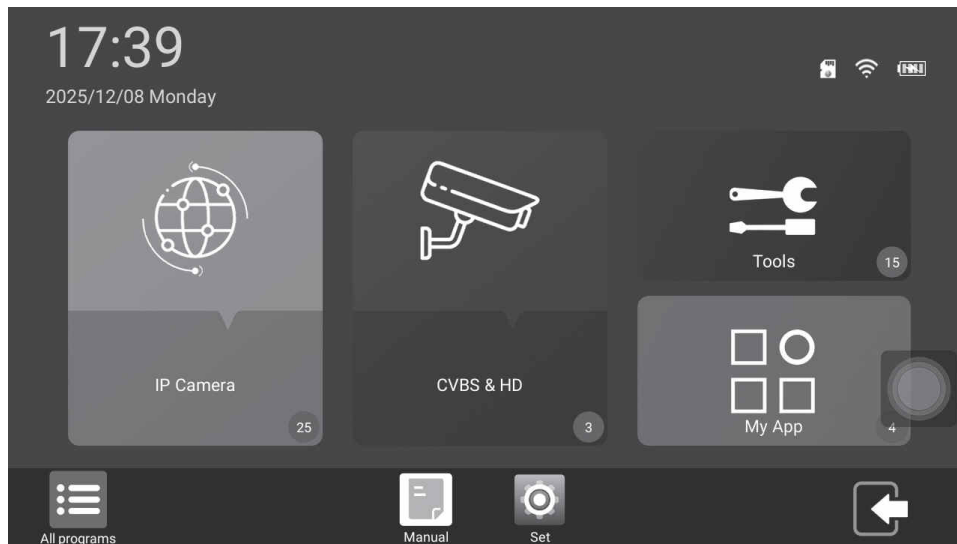


Figure 1 System Desktop

2) Tap the icon in the lower left corner “” to view all installed applications. Swipe left/right to view more. (See Figure 2.)

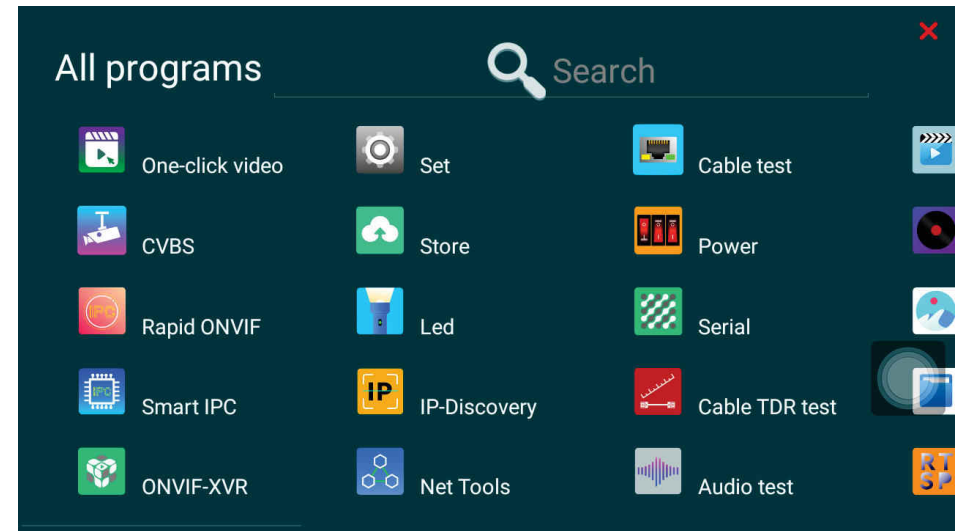


Figure 2

3) Press and hold an icon in the toolbar to drag it to any folder, the shortcuts bar, the “All Apps” area, or the uninstall icon “” to uninstall. Drag an icon into one of the 6 dotted boxes “” in the shortcuts bar to add it; drag within the shortcuts bar to reorder. (See Figure 3.)

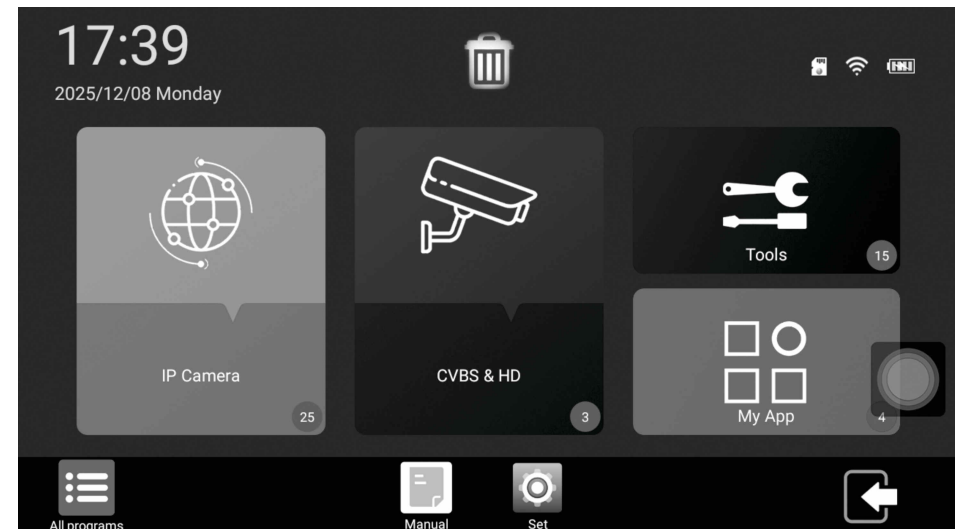


Figure 3

2.2 Analog Video (CVBS)

Simply tap the simulated video icon in the application interface to open the main interface for the testing function.(See Figure 4.)



Figure 4 CVBS Simulated Video Test Main Interface

When an analog video signal is connected to the analog input (CVBS) via a BNC video cable, the tester can directly display the analog video image and format.(See Figure 5.)

Operating steps:

1. Connect the analog camera to the tester’ s CVBS port using a BNC video cable.
2. Power on the analog camera to obtain the image.
3. On the desktop, tap “Analog Video” to open the test interface.

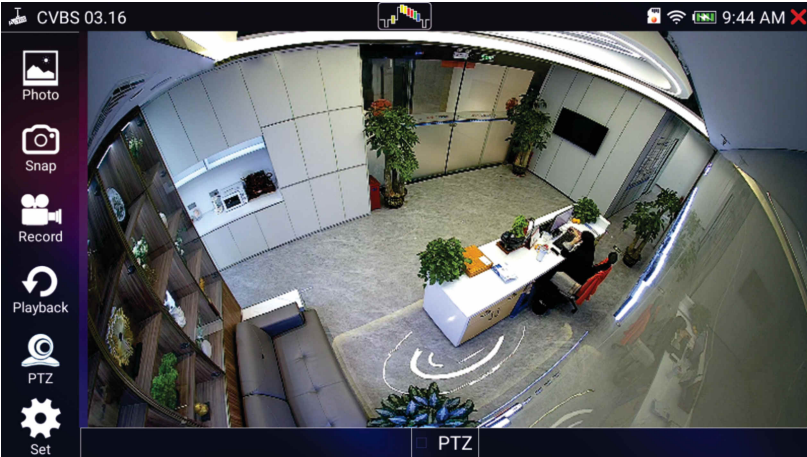
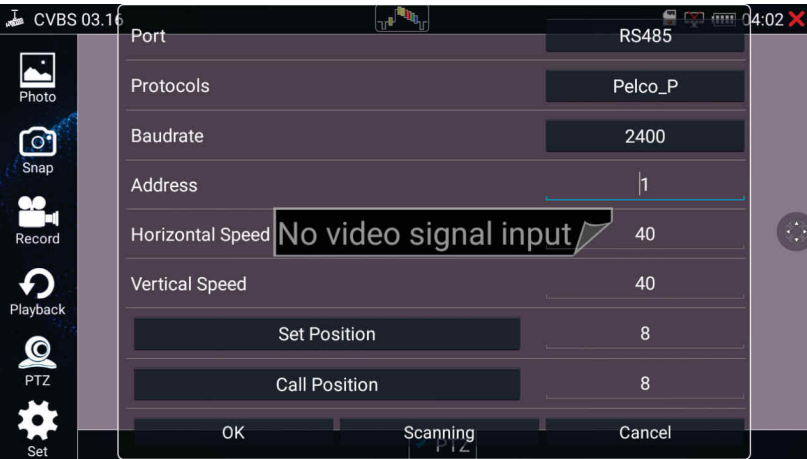


Image display when the camera is connected(See Figure 5)

Functions:

- 1)Take a photo: Click the photo icon on the left to take a photo. To view the photo you just took, simply click the photo on the left.
- 2)Recording: Tap the recording icon to start recording; tap again to stop. Use the playback button to view recorded videos.
- 3)PTZ Gimbal Operation: Turn on the PTZ gimbal button at the bottom to enable touch gimbal control, click the PTZ icon on the left to bring up the touch gimbal settings menu.(See Figure 6.)



(Figure 6)

Through this menu, you can set the PTZ protocol, port, baud rate, address, pan speed, tilt speed, and preset positions in sequence. After completing the settings, click the OK button to confirm. Once configured, you can control the PTZ by using the buttons or gestures to move or zoom.

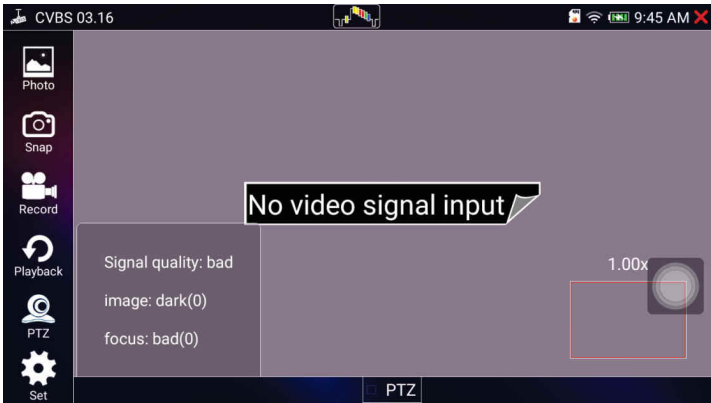
4)Image zoom function: Tap “PTZ” at the bottom to enable the zoom feature. After turning off the PTZ function, you can freely zoom and move the image by touching the screen and using gesture controls. The lower-right corner displays the current zoom magnification (up to 5×) and a thumbnail indicating the image’s position while moving. (See Figure 7.)



(Figure 7)

5)Full screen: Double-tap the video display area to enter/exit full screen.

6)Image Quality Test: Tap the icon “” at the top of the software interface to display the image quality data in the lower-left corner. Tap it again to close it (see Figure 8).



(Figure 8)

7)Advanced: In the lower right settings, configure screen sleep, photo watermark, hardware version (use with caution), test report and manual.(see Figure 9).



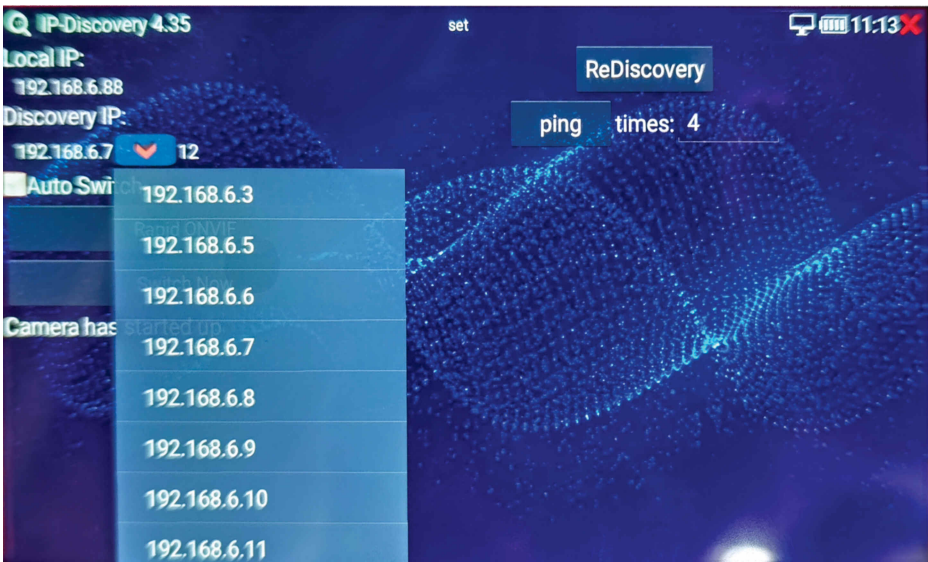
(Figure 9)

2.3 IP Camera: IP Scan & One-Key Video

IP Scan uses full-network scanning technology to automatically adjust the tester’s IP address to the same subnet as the camera, without manual configuration. It can verify whether the camera has started, perform PING network tests, and optionally jump to Quick ONVIF for one-key video preview. The tester can automatically store usernames and passwords. Some cameras support brute-force password recovery. It can also automatically identify Hikvision inactive cameras and assist with activation. Test reports can be generated.(see Figure 10)

Operating steps:

- 1. Connect the IP camera to the tester’s LAN port via an Ethernet cable, then power on the camera.
- 2. For PoE cameras, connect the camera to the tester’s LAN port, then turn on PoE output (see “Power Management”). No external power adapter is required.
- 3. On the desktop, open “IP Scan” or “One-Key Video”.

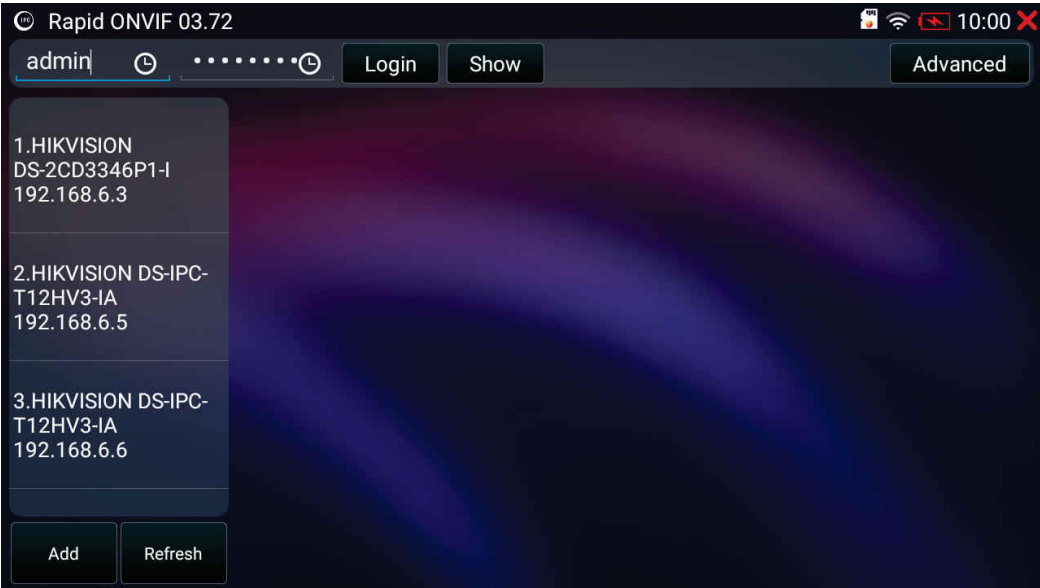


(Figure 10)

2.4 Quick ONVIF / ONVIF-XVR

Tap the “Quick ONVIF” icon on the desktop to enter this function. When the tester is connected to a network, it automatically scans ONVIF cameras in the current subnet. The scan typically completes within 1–2 seconds. For cameras that do not require authentication, tap the camera in the list to view the image. For cameras requiring authentication, enter the username and password to log in and preview.(see Figure 11)

1)Default username/password is often “admin”. If prompted that the username/password is incorrect, tap “Logout” to modify and try again. Auto login is enabled by default; you can disable it in Advanced Settings. Tap the clock icon “🕒” next to the credentials to view or delete previously used usernames/passwords.(see Figure 11)



(Figure 11)

2)Select the camera you want to operate. Tap the desired camera in the left-side list to display the live camera image directly. It supports playback of 8K H.265, H.264, and MPEG-4 videos. (see Figure 12)



(Figure 12)

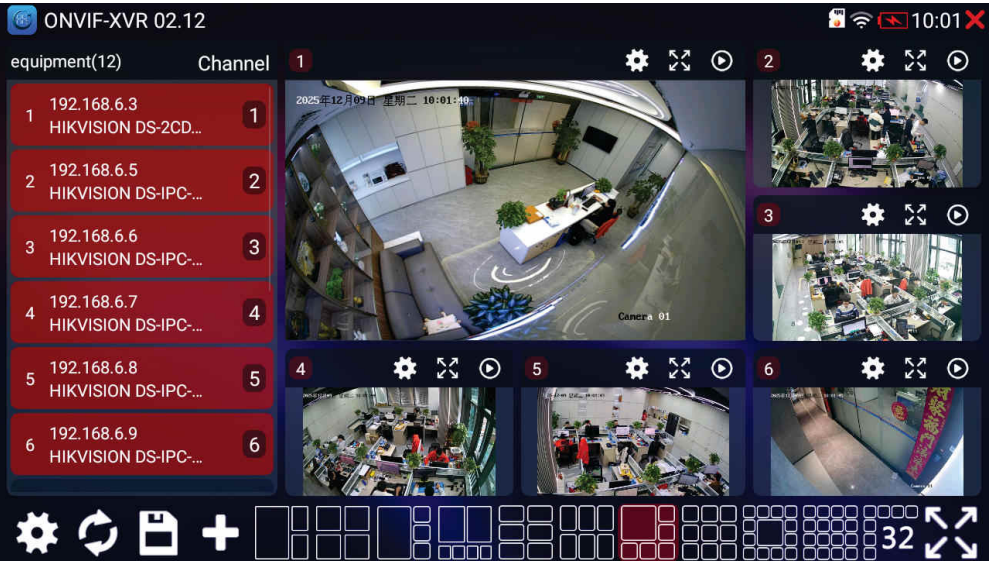
3)For photo capture, video recording, playback, full-screen display, and image zoom, please refer to the CVBS analog video operation instructions.

2.4.1 ONVIF-XVR: Multi-Camera Batch Preview

1)Most CCTV testers on the market only support single-screen viewing. Our company’s latest model now supports one-click simultaneous preview of up to 32 channels of Hikvision, Dahua, and other IP cameras. (see Figure 13)

Interface operation:

- 1.When all cameras are in the same subnet and use the same account/ password, the tester can display multi-camera live views. Multiple layouts are supported. Enabling simultaneous playback of up to 32 network cameras.
- 2.You can refresh all cameras in the subnet. Saved devices can be played directly next time; saved devices can also be cleared.
- 3.Supports adding new cameras for playback.
- 4.Double-tap a playing window to view in full screen. Snapshot is supported. You can modify OSD channel name and date/time.



(Figure 13)

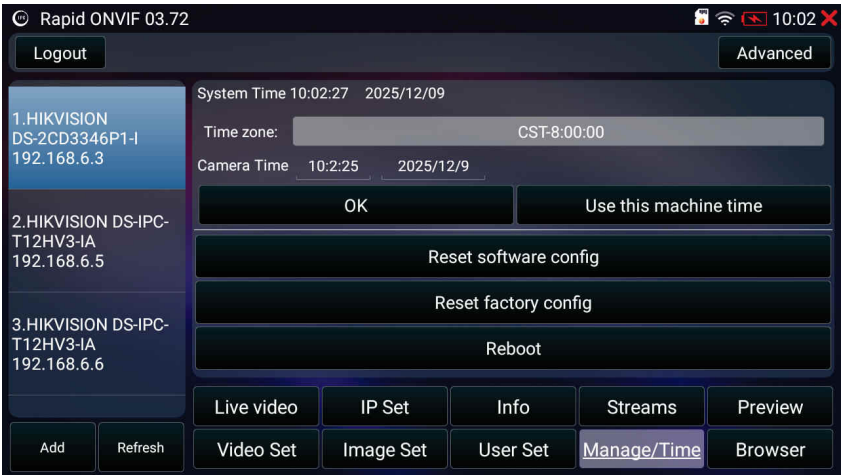
2.4.2 Parameter Settings (Quick ONVIF):

1)Device Information: Tap the Device Information button to view the camera details. You can tap the corresponding information field to directly edit the device name, then tap Apply to confirm the change, (see Figure 14)



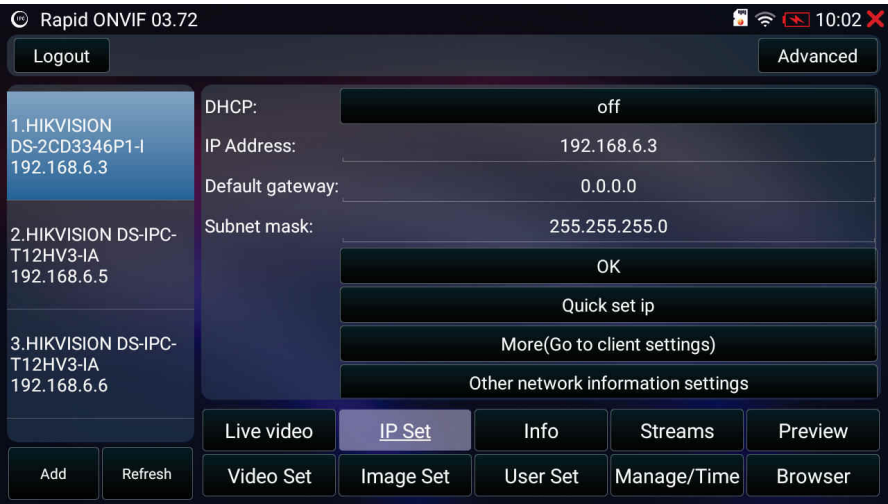
(Figure 14)

2)Maintenance / Time: Reboot the camera, restore software configuration /factory settings, and set camera time and time zone.(see Figure 15)

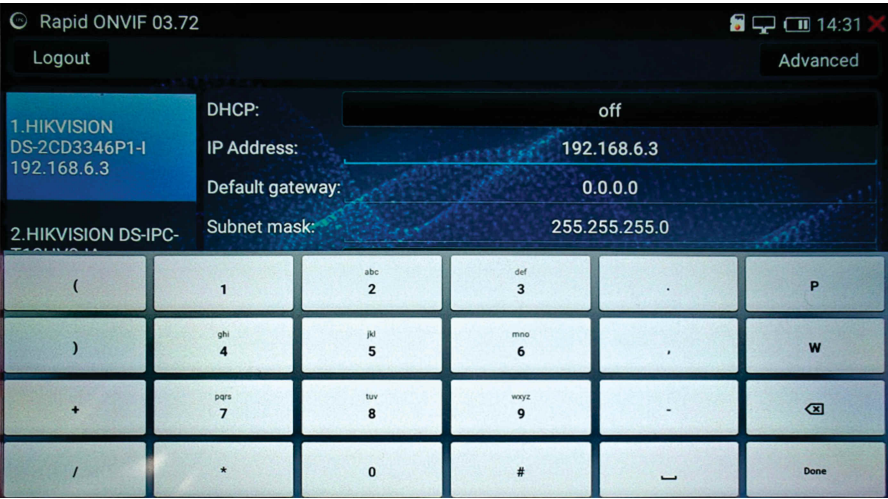


(Figure 15)

3)IP Settings: Configure network parameters (IP address, subnet mask, gateway). Supports Quick Set IP and additional network settings.(see Figure 16,17)

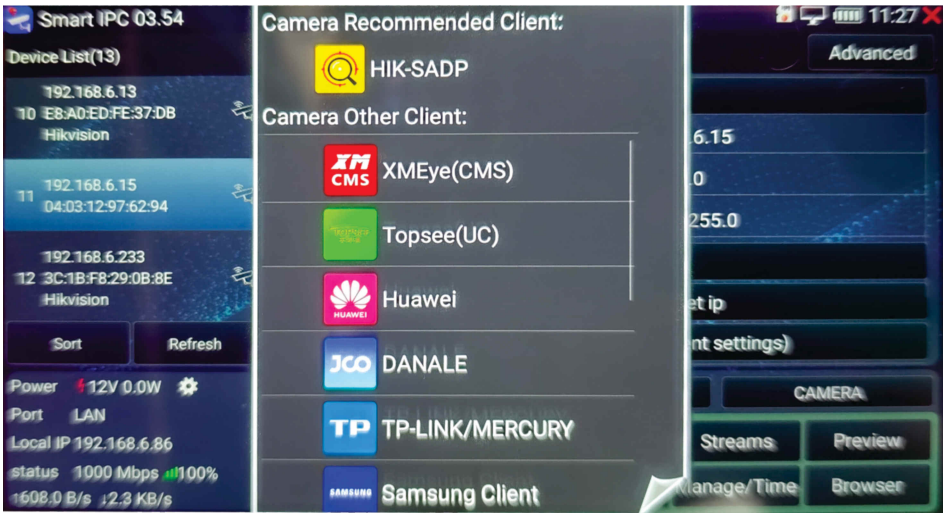


(Figure 16)



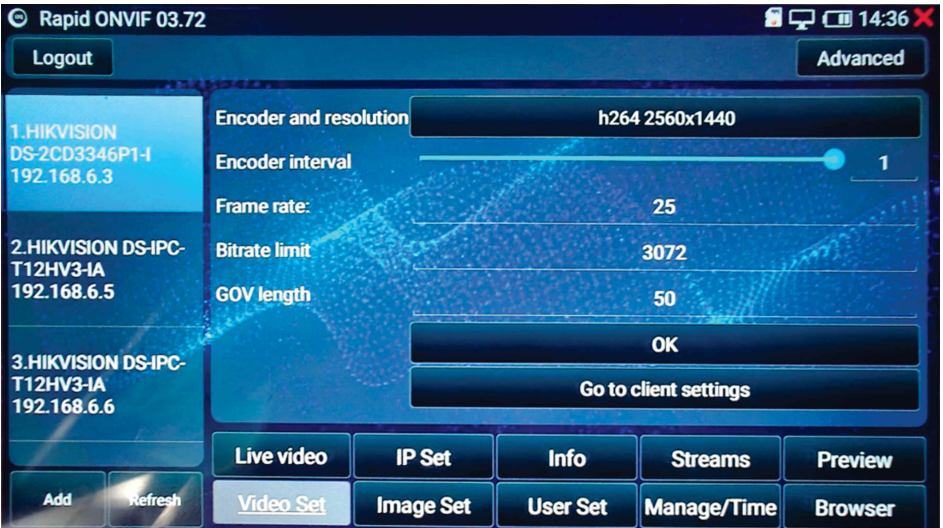
(Figure 17)

4)IP can't be changed: In Fast ONVIF, tap IP Settings to modify the IP address. If it cannot be changed, tap More in the middle section. For some cameras whose IP address cannot be set, the app will list all available camera client programs and recommend the appropriate client software. Tap to open the corresponding client and configure the settings. (see Figure 18)



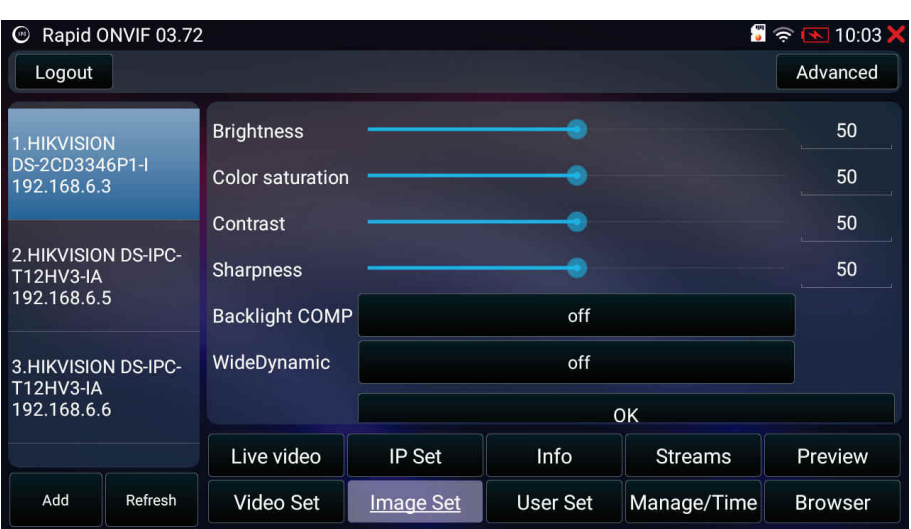
(Figure 18)

5)Video Settings: Set encoding format, resolution, encoder interval, image quality, frame rate, bit rate, GOV length, etc.; tap Apply to take effect.(see Figure 19)



(Figure 19)

6)Image Settings: Adjust brightness, saturation, contrast, sharpness, backlight compensation, wide dynamic range, etc.; tap Apply to take effect.(see Figure 20)



(Figure 20)

7)Stream Selection: Tap the Stream Selection button to view the current stream profile, and switch between the main stream and the sub stream. (see Figure 21).

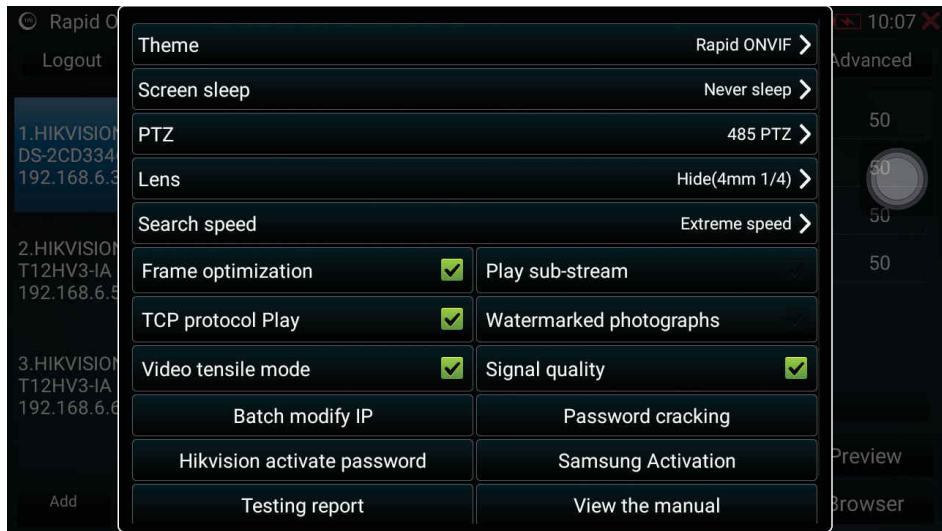


(Figure 21)

8)**Add button**: Tap the “Add” button in the lower-left corner to manually add the IP address of an ONVIF camera.

9)**Refresh button**: Click the Refresh button to refresh the list of all ONVIF cameras on the current network segment.

10)Advanced Settings: You can configure options such as auto login, sub-stream playback, watermark on photos, video stretching, and lens simulation. (see Figure 22)



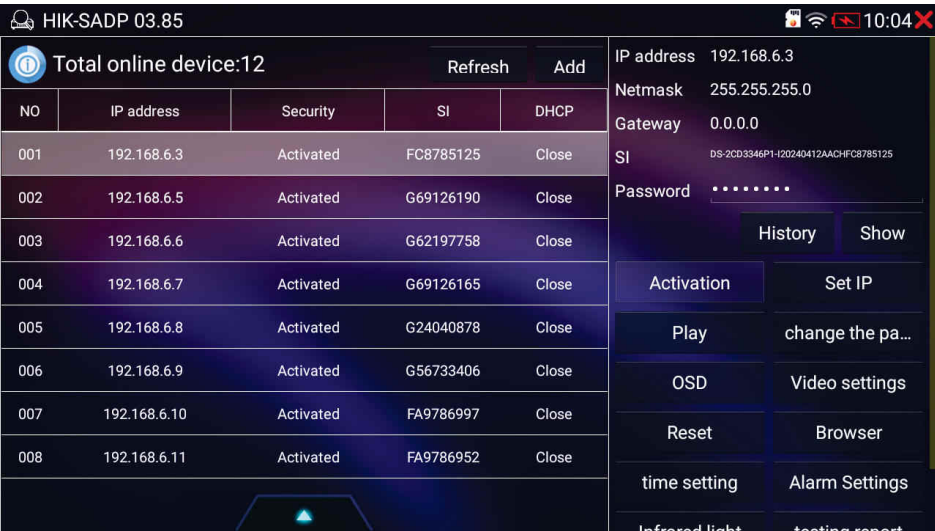
(Figure 22)

Channel Name Modification Settings:

On the ONVIF interface, tap Device Info, then tap the OSD option at the bottom to open the editing screen for the channel name and the date/time. If you cannot modify it on this screen, please make the change in the camera’s corresponding client software. If no camera client is available, log in to the camera’s configuration page via a web browser to modify it.

2.5 Hikvision SADP

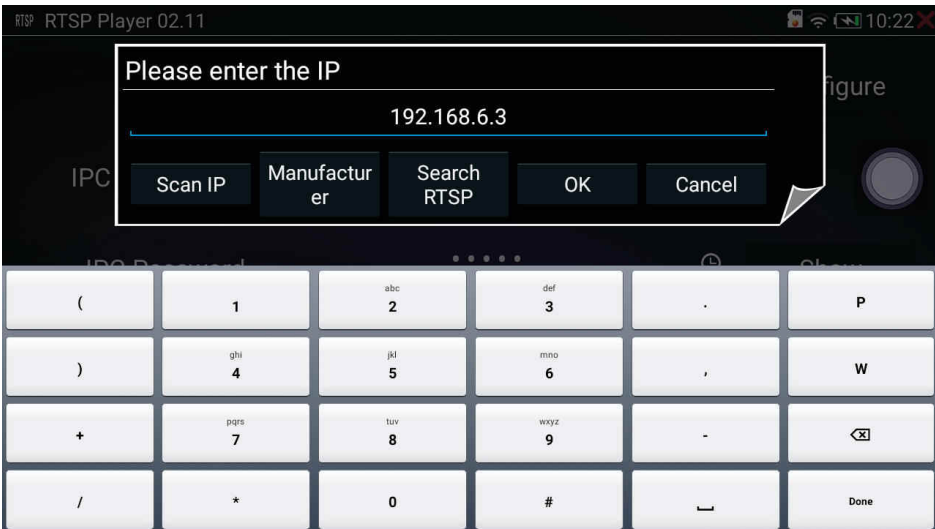
Hikvision SADP can scan Hikvision cameras across the network. If devices cannot be found by scan, you can manually add an IP address. It can identify activation status, configure camera IP, view serial number, activate and batch activate, set IP and batch set IP, modify password, modify channel name, restore factory settings, jump to browser, and provide multiple ways to preview camera images. (see Figure 23)



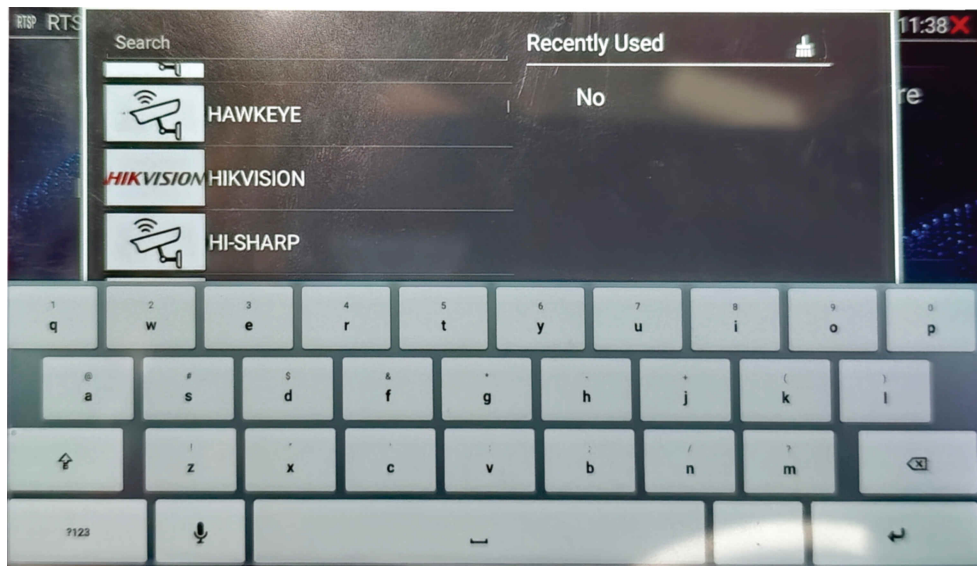
(Figure 23)

2.6 RTSP Player

The RTSP Player supports manual input of an RTSP URL for direct playback. You can enter an IP address and scan IP to automatically search for RTSP addresses. You may also select a manufacturer to use preset RTSP URL formats. The tester is compatible with most camera brands.(see Figure 24,25)



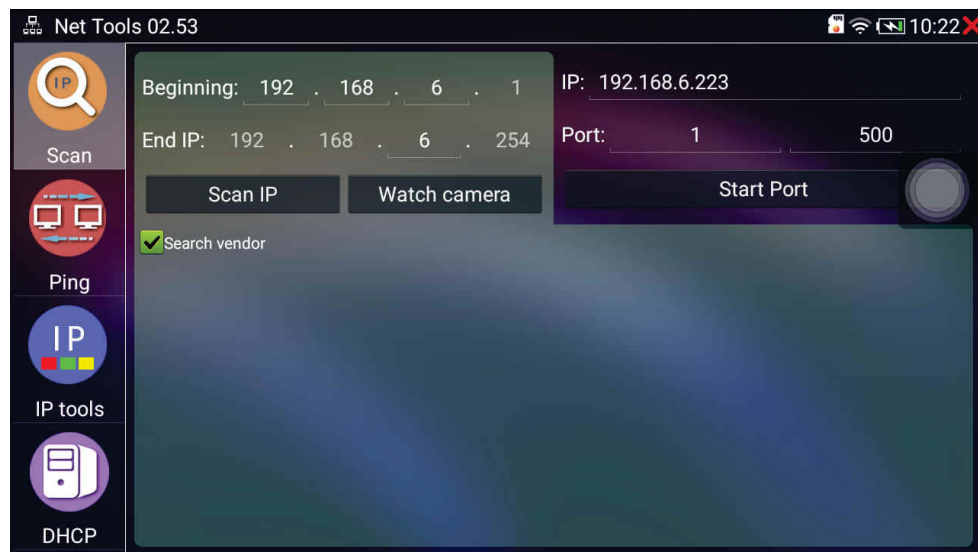
(Figure 24)



(Figure 25)

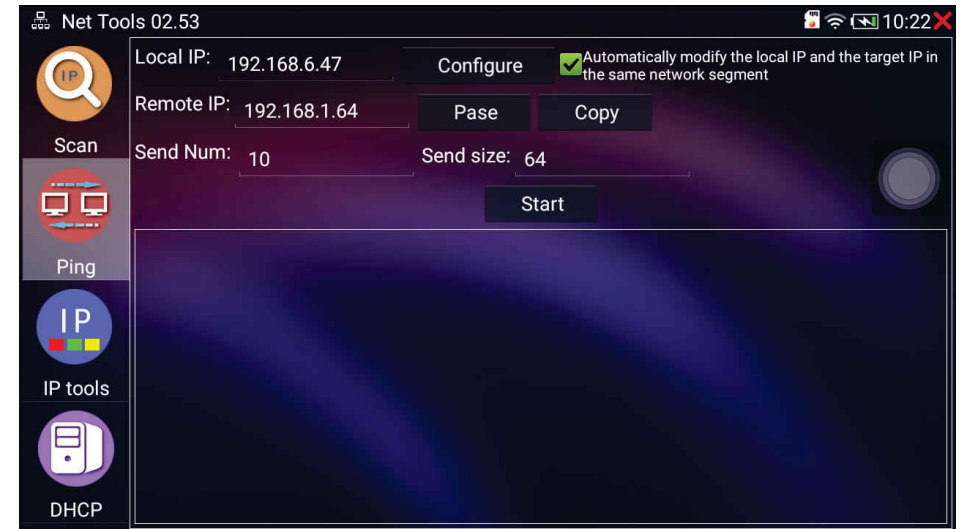
2.7 Network Tools

1)IP Scan: Scan all IP addresses in the subnet; the tester can intelligently identify camera IP addresses. Tap “Watch Camera” to jump to Quick ONVIF.(see Figure 26)



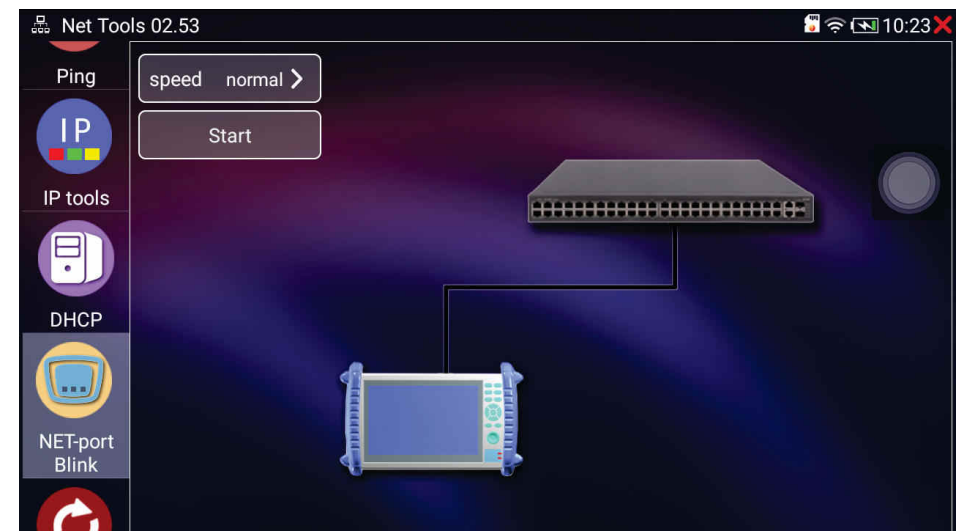
(Figure 26)

2)PING Tool: Enter a target IP address, number of packets and packet size (defaults available) to test connectivity and latency.(see Figure 27)



(Figure 27)

3)Port Flashing: Connect the network cable to the LAN port and tap Start; the switch/NVR port LED will flash to help locate the port. The flashing speed can be adjusted; the default cycle is about 2 seconds.(see Figure 28)



(Figure 28)

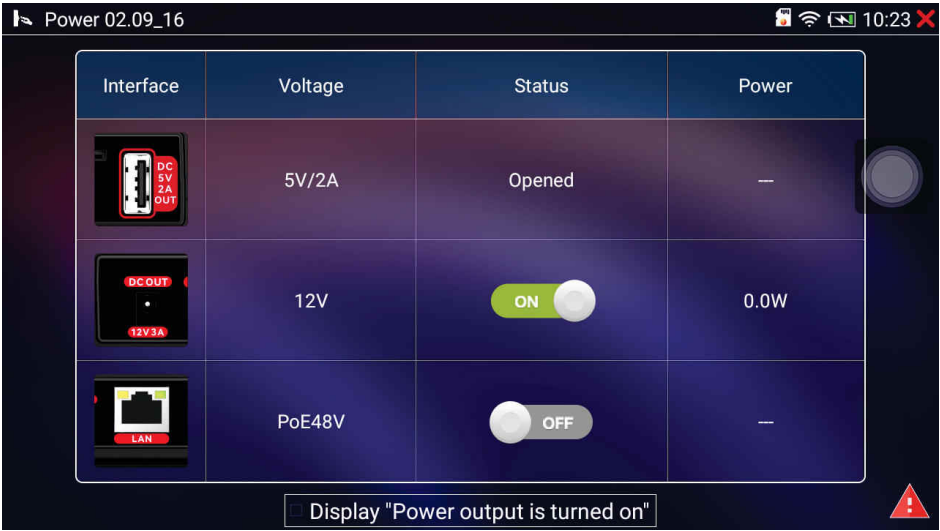
2.8 Power Management

Power Management provides temporary 48 V PoE power for PoE cameras. Tap the PoE power icon to open the PoE control interface. USB 5 V/2 A and DC 12 V outputs are enabled by default and usually do not require manual activation. Tap the switch icon to turn 48 V PoE on/off.(see Figure 29)

Operating Instructions:

PoE 48 V Output: Connect the LAN port to the PoE camera. Turn on the PoE switch to provide temporary power (standard PoE 48 V output).

Warning: Before using PoE output, confirm that the camera supports PoE input. Do not connect non-PoE devices to avoid damage.



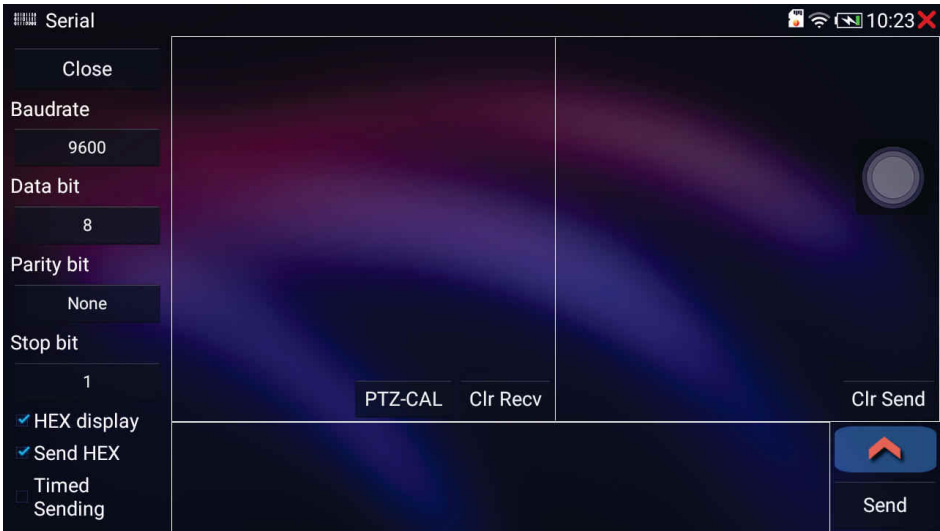
(Figure 29)

2.9 RS485 Serial Port Tool

The RS485 tool can receive, send and analyze data through the RS485 interface, and can be used for PTZ protocol analysis. It supports setting baud rate, data bits, parity and stop bits. Data can be displayed and sent in ASCII or hexadecimal format. Use “Clear Receive” or “Clear Send” to clear the buffers.(see Figure 30)

Operating Instructions:

- 1.Connect the RS485 cable to the RS485 port. Use the alligator clips to connect to the device; distinguish positive/negative polarity to avoid mis-wiring.
- 2.On the desktop, open the “Serial Port” application.



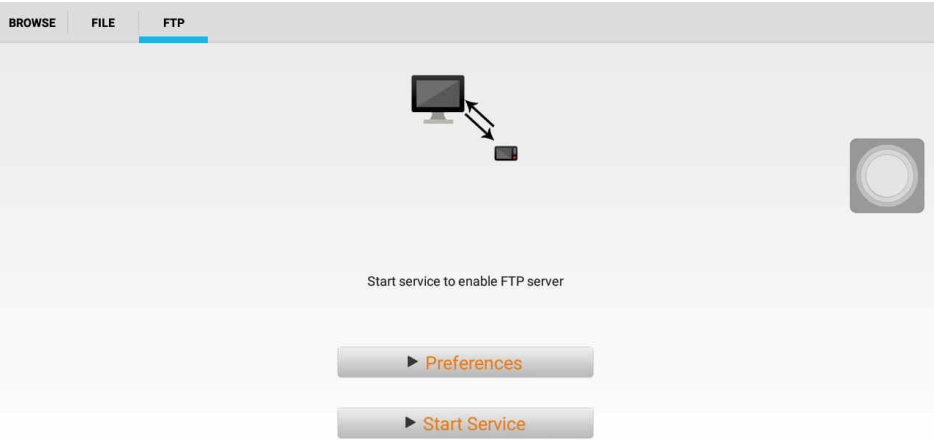
(Figure 30)

2.10 File Manager

File Manager allows convenient copy/move/rename operations for files stored in internal storage and external SD card. When the tester is connected to a LAN, you can enable FTP remote management to operate files directly from a PC without removing the SD card.

▲ Remote Management (FTP)

When connected to a LAN, tap “Start Service” to enable the FTP server. On a Windows PC, open “This PC” and enter the FTP address shown on the tester (example: ftp://192.168.1.108:2121) in the address bar to access internal storage and SD card files for browsing, copying and deleting.(see Figure 31)



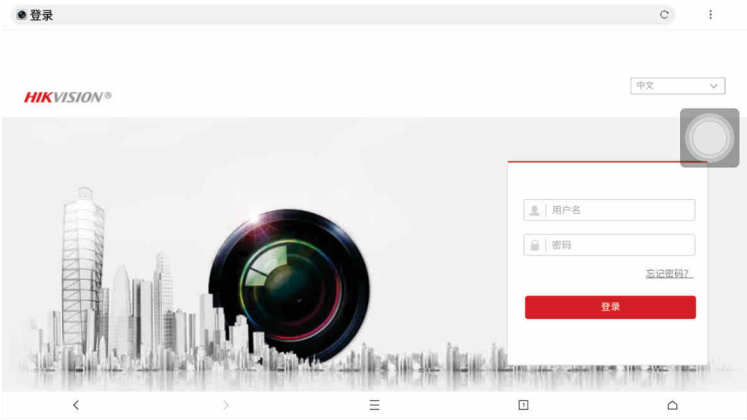
(Figure 31)

2.11 Browser

1)The Browser allows direct access to an IP camera’s web interface. Tap the Browser icon on the desktop and enter the camera IP address in the address bar to open the login page. Enter the camera username and password to log in and modify camera IP and parameters.(see Figure 32)

Note: Most engineering testers do not support browser plugin installation.

1.Using a Hikvision IPC camera as an example: enter the Hikvision camera’s IP address to open the camera’s web page.



(Figure 32)

2)Enter the camera’s username and password to log in to the camera’s web configuration page, where you can directly modify the camera IP address and other parameters (see Figure 33).



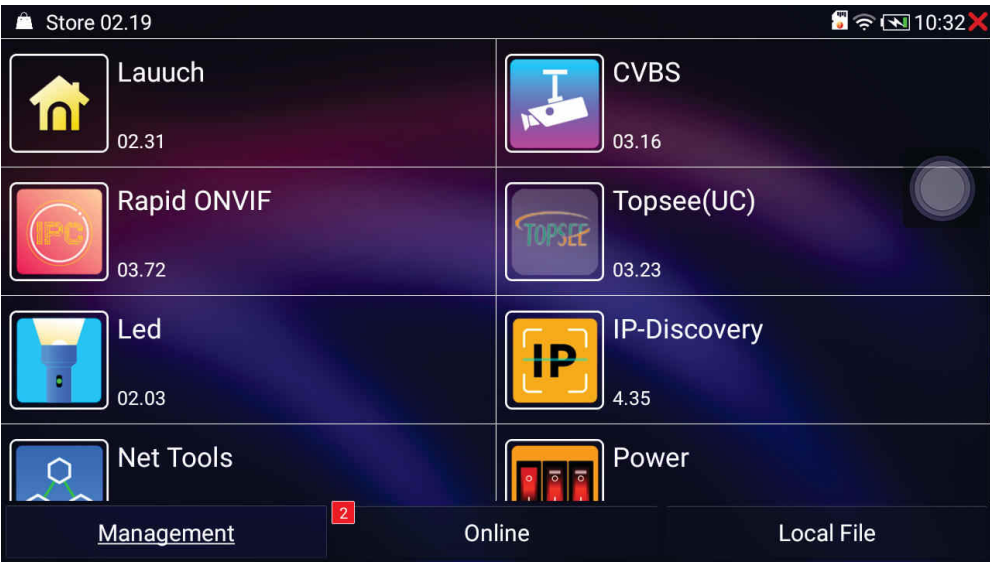
(Figure 33)

2.12 Upgrade Center

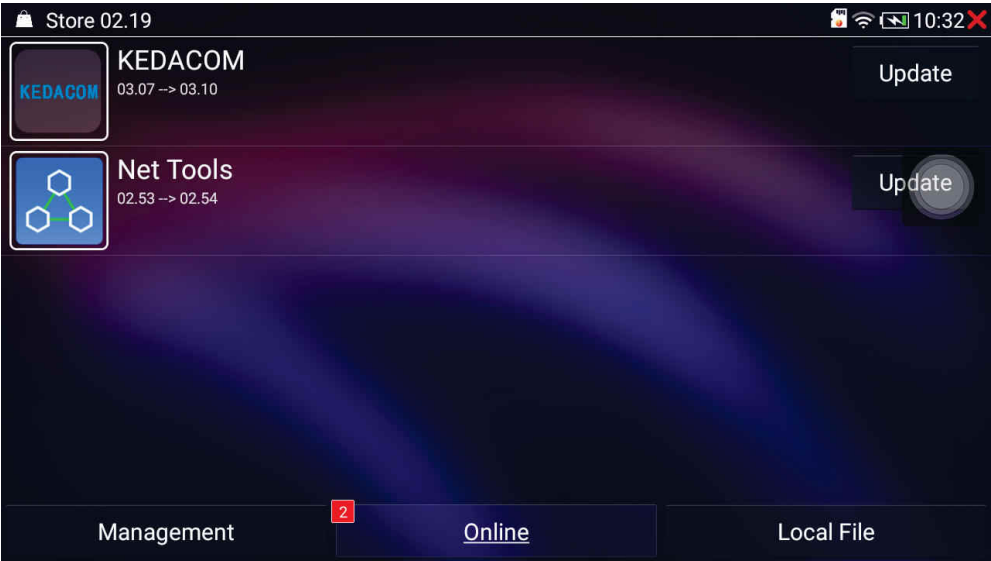
Upgrade Center is used for application management, installation and uninstallation. It supports two installation modes: online installation (connect to server) and local installation.

1)In the Upgrade Center, you can view the application version number and upgrade the instrument software either online or locally. The number shown under each application name is the current app version. Tap the corresponding application to jump to its function manual, and long-press to uninstall the software. After uninstallation, if it is a built-in system app, you can drag up or down at the bottom to restore and reinstall the factory-default software. Tap the App Center icon to enter the application upgrade function, (see Figure 34).

2)Online installation: When the device is connected to the internet, it will connect to the server and check whether any software updates are available, (see Figure 35).

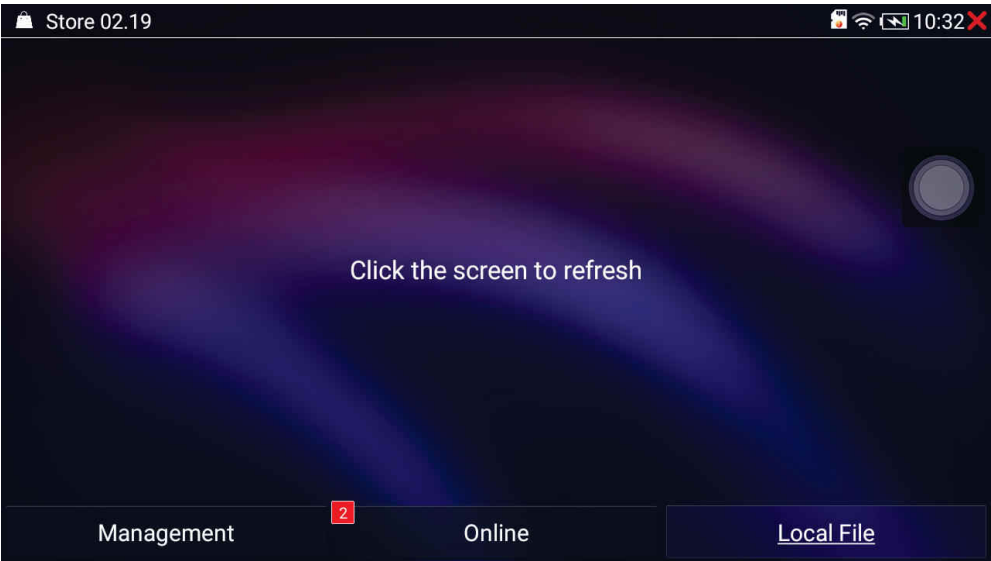


(Figure 34)



(Figure 35)

3)Local Install: Scans internal storage, SD card and USB disk for install packages. Long-press a file to delete the corresponding installation file. (see Figure 36)



(Figure 36)

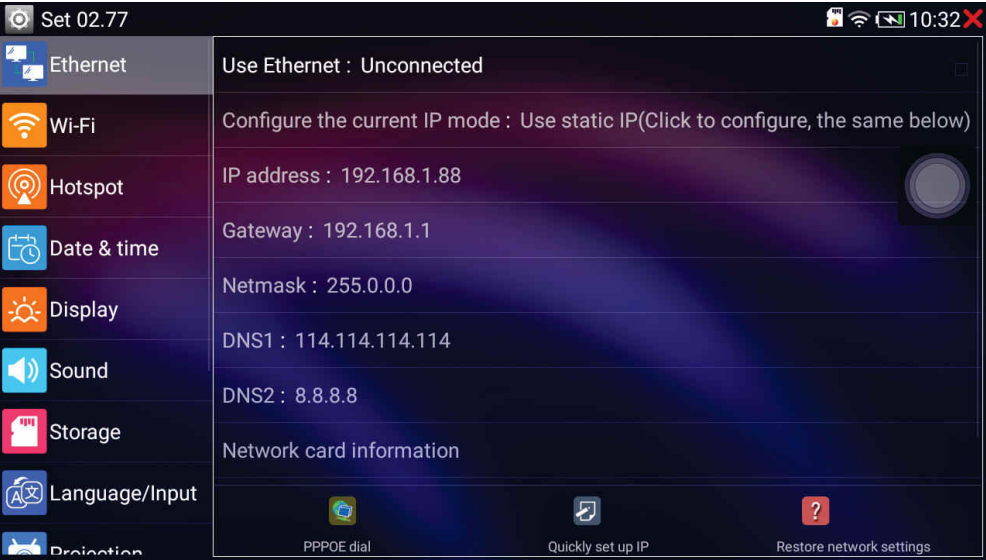
2.13 Settings

Settings allow configuration of network parameters, Wi-Fi, date/time (when connected to the network), backlight, volume, sleep time and language. You can also view system version information.

1)Ethernet settings: Tap the Ethernet icon on the left and enable the Ethernet function. Connect the network cable to the device’s LAN port. The device supports both static IP and dynamic IP modes. If you want to use a static IP address, select the “Use Static IP Address” field, then set the device IP address, gateway, subnet mask, preferred DNS, and alternate DNS in sequence. You can also add IP addresses for multiple network segments,(see Figure 37)

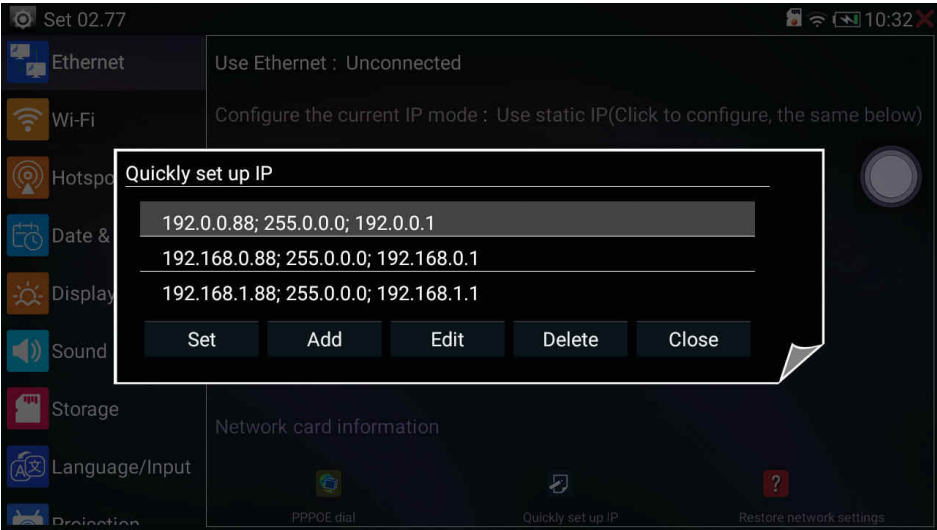
1.The instrument uses a static IP address of 192.168.1.88 by default, with a gateway of 192.168.1.1, a subnet mask of 255.255.255.0, a preferred DNS of 192.168.1.1, and an alternate DNS of 8.8.8.8.

2.Using a static IP address, the instrument is set to dynamically obtain an IP address automatically. The instrument's IP address is 192.168.1.82, (see Figure 37).



(Figure 37)

3.Click the icon “ ” below to quickly set your IP address. In the quick IP setting, you can add, edit, or delete frequently used IP addresses. Click the icon “ ” below to restore the default network settings. (See Figure 38)



(Figure 38)

2)WLAN Settings

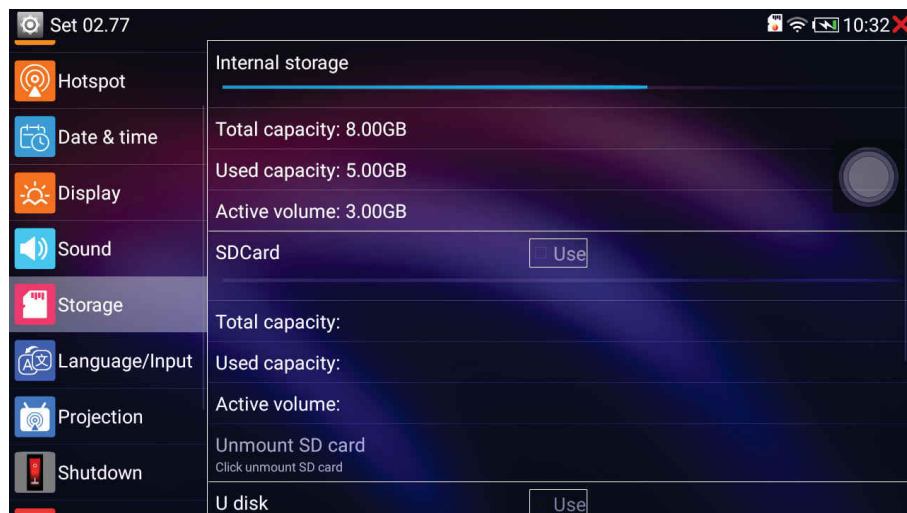
Caution: When using Wi-Fi, unplug the Ethernet cable; otherwise the tester will use Ethernet as the default network connection.

3)WLAN Hotspot

Caution: Wi-Fi hotspot and Wi-Fi client mode cannot be used at the same time.

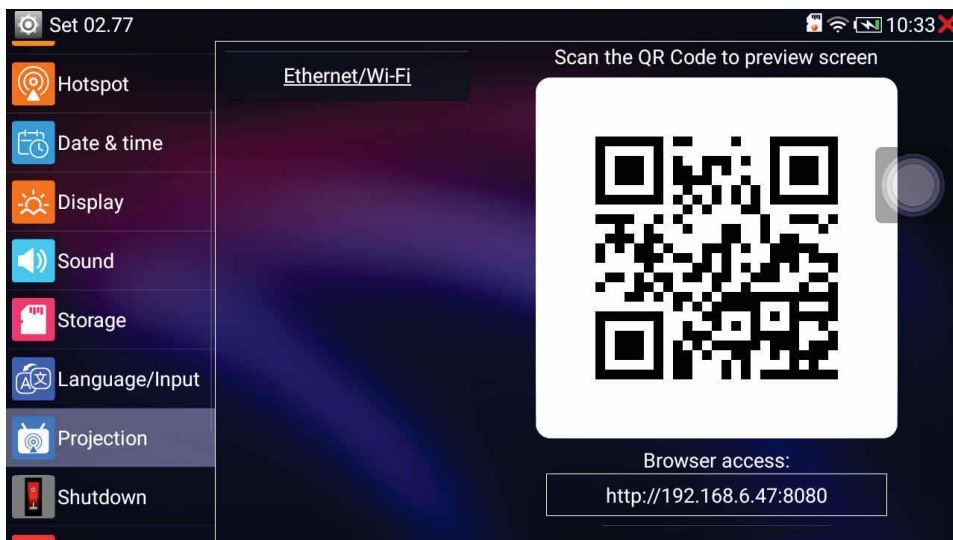
Storage:You can view internal storage space and available capacity, as well as external SD card and USB disk capacity. When selecting SD/USB for use, the storage path switches accordingly. If not selected, the default storage path is internal. Warning: Before removing an SD card or USB disk, unmount it first; otherwise data loss or damage may occur.You can view internal storage space and available capacity, as well as external SD card and USB disk capacity. When selecting SD/USB for use, the storage path switches accordingly. If not selected, the default storage path is internal. (see Figure 39)

Warning: Before removing an SD card or USB disk, unmount it first; otherwise data loss or damage may occur.



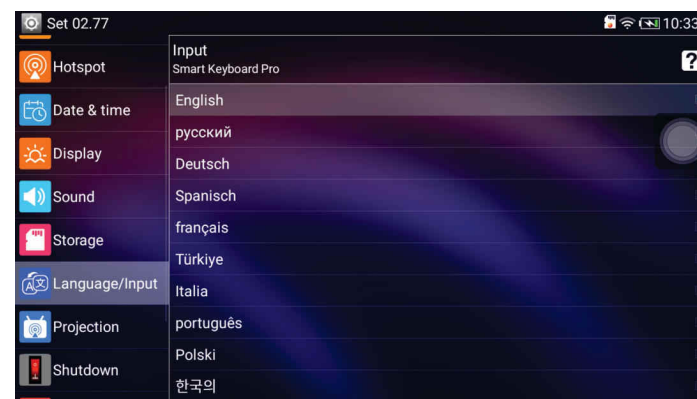
(Figure 39)

5)Screen Projection (Casting):The tester supports screen projection via Ethernet, WLAN, and WLAN hotspot (hotspot must be enabled first). It supports Android, iOS (Apple), Windows Phone, BlackBerry, and PC devices. No app download is required. You can scan the QR code to cast the screen or enter it manually.(see Figure 40)



(Figure 40)

6)Language / Input Method: Multiple languages are built in. You can switch among common languages such as English, Russian, Japanese, etc.(see Figure 41)



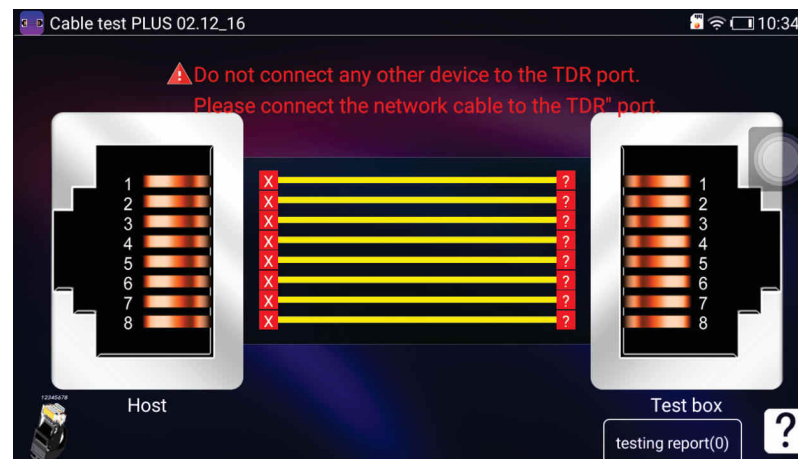
(Figure 41)

2.14 Network Cable Test

The network cable test function displays cable continuity and connection status. A built-in wiring diagram is provided. With the test box connected to the TDR port, it can test the cable and indicate which end has a fault (connector problem). A test report can be generated.(see Figure 42)

Operating steps:

- 1.Connect the network cable to the tester's TDR port; connect the other end to the test box.
- 2.On the desktop, open "Network Cable Test".



(Figure 42)

Warning: The TDR port must not be connected to a network switch. Do not connect devices with voltage above 5 V; otherwise the network port may be damaged.

1.If a cable fault is shown in the cable test and you need to determine whether the remote RJ45 plug is faulty, the cable length must be at least 2 meters.

2.15 Cable TDR Test

The TDR test can display cable length, attenuation, quality, reflection coefficient, and impedance. Open “Cable TDR Test”. Tap the help icon (lower right) to view detailed instructions. You can set units, view connection diagrams and cable sequence diagrams, and generate test reports.(see Figure 43)

Operating steps (summary):

- 1.Connect the cable to the tester’s LAN port to view cable status and length. If the length cannot be measured, do not connect the other end to any device.
- 2.Cable length should generally be ≥10 m to perform stable length tests.
- 3.Reflection coefficient and impedance functions are available when communicating with the camera (as supported).
- 4.Click to open the desktop application "Network Cable TDR Test" to open the test interface.



(Figure 43)

Notes:

- 1.The cable length range for TDR measurement is 2–195 meters.
- 2.Length measurement results may have a certain error; the error is within ±3%.

2.16 More Applications: For detailed use of additional software functions, please refer to the electronic manual built into the instrument.