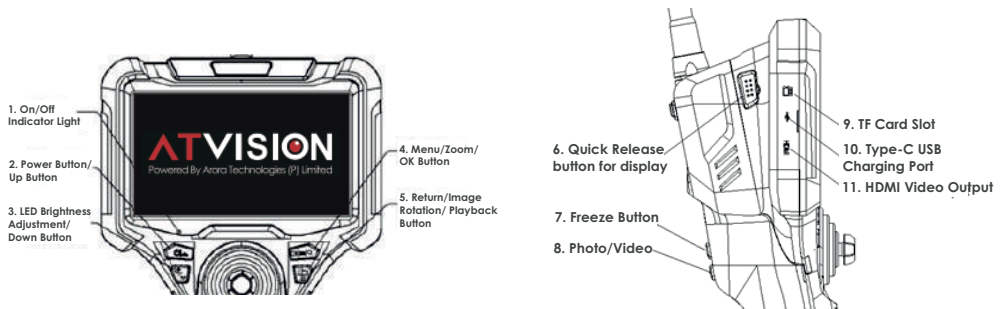




Operation Manual
ATVISION Multifunctional
Videoscope

Instruction before use

Button and Port



1. ON/OFF indicator light: the boot and normal operation is blue light, red when charging, and turn into blue after full.
2. Power button/Up button: used for switching the equipment/when the equipment enters the menu or album, press this button to upward navigation.
3. Brightness adjustment/secondary menu switching button: short press brightness cycle adjustment/device into the menu or album can be down page, the second level menu can be used under the sub-function switching.
4. Menu/Zoom/OK button: enter the menu page, select the corresponding function, press this button to confirm/enter the menu page. Long press to adjust the magnification levels.
5. Return/Image rotation/Playback button: In various states, it can return to the previous level. Under the preview interface, it can be used for reviewing photos/videos. Long press to rotate, flip, and mirror the image
6. Quick release button for display: Press both buttons simultaneously to remove the display. If multiple specifications of pipelines are selected, a single display can be shared.
7. Freeze button/Menu up button/Parameter adjustment button: screen freeze, menu call.
8. Photo/Video: short press for taking photos and long press for taking videos. When in the video storage interface, short press to play the recorded video.
9. TF card slot: external TF card, as the equipment memory.
10. Type-C USB charging port: for device charging, using fast charging PD3.0, charging voltage 12V, current 1.5A.
11. HDMI video output: used for output video signals, external HDMI video equipment.

Application

ATVISION ensures detection of surface discontinuities, like cracks, deposits, corrosion, wear & tear, etc. It plays vital role in detection of inner surface discontinuities and monitoring the assets integrity in HVAC, chemical, oil & gas industries. It also serves automotive, aerospace industries for inspection of hard-to-reach areas.

Warning

- Prohibit the use of ATVISION Series of Multifunctional Videoscopes to observe the body or the animal's body.
- Do not use ATVISION Series of Multifunctional Videoscopes to inspect equipment in action.
- Do not use or store ATVISION Series of Multifunctional Videoscopes on explosive, strong electromagnetic field or with combustible gas, otherwise it may cause fire or explosion.
- Do not use ATVISION Series of Multifunctional Videoscopes to check objects with current carrying, so as to avoid the occurrence of electric shock.
- Do not remove the battery cover without permission. If you need to remove the battery cover, please contact our customer support team at support@arorandt.com
- Do not see the LED light source with naked eyes it may hurt your vision.
- Avoid strong bending, folding and stretching of the probe to avoid damage.
- Keep the insert tube away from any liquid, except water, salty water or oil.

1.Brief Introduction

1.1 Technical Specifications

Probe Diameter	Φ3.8 or Φ6.0
Probe Material	Tungsten wire wear-resistant tube /TPU alloy
Camera Pixels	1 mega pixels/ 2mega pixels
DOF	10-100mm
FOV	90°/120°
Viewing Direction	0° front view / 90° side view / dual view
Light Source	Front ultra bright ceramic light/Rear fiber optic cold light source
Tube Material	Tungsten wire wear-resistant tube
Tube Length	3.8mm (1, 2, 3, 4, 5meter), 6.0mm (1, 2, 2, 3, 4, 5,6,7,8,9,10meter)
Protecting Device of Durability	80mm buffer protection device between tube and handle
Articulation	360° all-way
Bending Angle	Max 190°
Photo / Video Function	One click to take photo and video, support playback

Display	5.0" color IPS Display
Display Resolution	1280 x 720
Photo/Video Format	JPG / MP4
Photo & Video Resolution	1280 x 720/1920 x 1080
Zoom Function	Image 4X
Audio function (optional)	Real-time audio recording
WiFi Transmission	Real time transmission from the equipment to the mobile terminal through WiFi connection, and the ability to save images and videos on the mobile terminal
High Temperature Alarm	Probe high temperature alarm (optional)
Outer Case	Anti-fall engineering alloy material
Water/Dust Proof	Probe: IP68
Monitor Structure	One hand-held monitor
Memory	Standard TF card 16G, maximum: 128G
Data Port	HDMI port / Type-C USB port
Batteries	Built in polymer lithium battery
Working Time	≥ 6 Hours
Battery Capacity	3.7V,9400mAh, +3000 mAh
Power Consumption	3.5W
Power Charge	DC12V, maximum current:1.5A
Weight	≤0.75 kg (including batteries)
Compatibility	Optional with multifunctional accessories
Store Temperature	-23°C~63°C
Relative Humidity	Maximum 92%, non-condensing
Working Temperature	-30°C~50°C, when 0°C below, the display needs preheating.
Camera Working Temperature	-25°C~80°C, when 0°C below, please reduce probe articulation

2. Operation

2.1 Take out the instrument

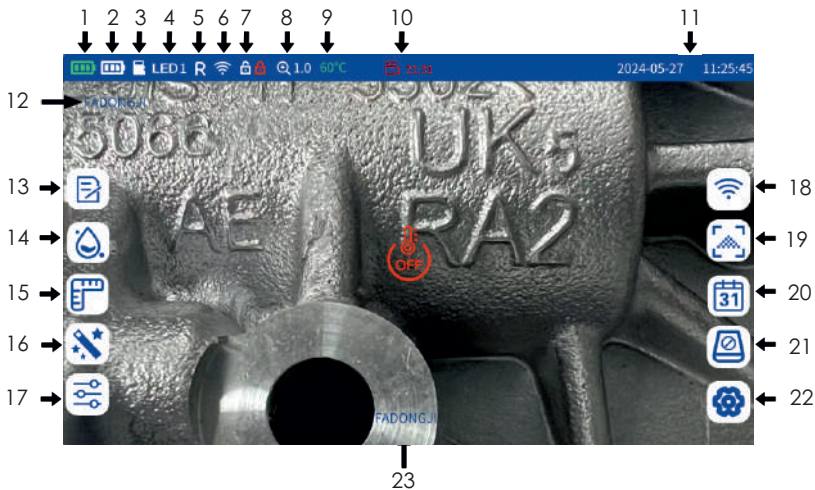
Open the instrument case, while taking out the instrument host, set aside and pay close attention to the probe; avoid colliding the probe and scratching lens.

2.2 Boot preparation

Visually check whether the appearance of the videoscope is intact, insert the TF card, straighten the insertion tube, and adjust the direction of the probe to 0°.

2.3 Operation

This product supports 0~9 level brightness cycle adjustment, press the brightness adjustment button to adjust the probe light source to the appropriate brightness. Then insert the insertion tube slowly into the equipment to be inspected. The operation interface of this product is shown below:



Explain the role of each function icon of the floating window in order from top to bottom and from left to right:

1. **Handle battery power display:** shows the power of two batteries in the handle section.
2. **Main unit built-in battery display:** displays the power level of the main unit's independent battery.
3. **Memory Card Alert:** shows if a memory card is currently inserted.
4. **Brightness level:** the brightness level of the lens light source of the display device.
5. **Image rotation:** displays the current orientation of the image, which can be rotated & mirrored.
6. **WiFi:** shows if WiFi is on.
7. **Freeze:** image freeze prompt when freeze button is pressed.
8. **Image zoom level:** displays the zoom level of the current image.
9. **Temperature display:** display the current temperature of the front lens of the device, 1°C-69°C display green, 70°C-79°C display orange, 80°C display red, 95°C alarm prompts automatic shutdown.
10. **Video Duration Display:** indicates that a video is being recorded and displays the exact duration.

11. **Date and time:** display real-time date and time.
12. **Filename prefix position display:** displays the set filename prefixes.
13. **File name prefix:** set the file name prefix for photo and video recording.
14. **Watermark:** set the watermark that needs to be added to the photo to be displayed.
15. **Scale:** set the base reference scale for real-time image preview, there are three kinds of scales: circle, cross and rectangle.
16. **Image effects:** set the preview effect of the image, there are black and white, cool colors, warm colors, negative 4 kinds of effects.
17. **Image Parameter Adjustment:** adjust the display parameters of the image.
18. **WiFi:** setting the WiFi function on and off.
19. **Resolution selection:** set the photo resolution, can be set 2x and 3x.
20. **Date and time:** set the system display time.
21. **Format:** format the memory card.
22. **System Settings:** setting the recording mode on/off and screen brightness.
23. **Watermark display:** the set watermark display position.

Note: the probe temperature alarm is shown as an optional function, if you haven't bought this option you will not see this icon.

2.4 Probe articulation control

According to the testing need, operate the joystick to control probe articulation, in order to observe. The bending motion of the front probe is controlled by rotating the joystick. During the operation, if the joystick suddenly meets larger resistance, or there is any abnormality, please immediately stop using. After adjusting the joystick to the middle position, please remove the insert tube carefully from the testing equipment.

2.5 After use

Before you remove the insert tube from the inspected object, please make sure the probe is reset to be straight. Turn off the power switch, put the ATVISION Series of Multifunctional Videoscope into the portable case carefully.

3. Image Capture

3.0 Key Reuse Instructions

Functions	Key Icons	Icons	Functions	Key Icons	Icons
Menu			luminance		
OK			Switch		
Zoom			Freeze		
Playback			Photo/Video		
Return			Upward		
Rotating			Downward		

3.1 Photo/Video

- ① Short press “ ” to take a photo.
- ② Long press for 2 seconds “ ” to record video. Then long press 2 seconds to quit and save the video; During recording you can press “ ” to save the photos;

3.2 Playback

In preview mode, press “ ” to jump to photo video storage files, and switch between video and photo files and exit file previews by pressing this key; Also press “ ” and “ ” to switch up and down between files.

In the playback by pressing “ ”, to delete pictures or videos.

Video playback, press “ ” to pause or resume playback.

3.3 Brightness adjustment

In the preview mode, short press “ ” to adjust brightness from 0-9 levels.

3.4 Function bar

Press “ ”, to call up the function bar, as shown in the figure below. Press “ ”, “ ” to move the selected function, then press “ ” to confirm the desired function. After entering the secondary menu by pressing “ ” to adjust specific functions, parameters.

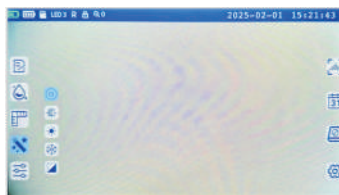
3.4.1 Resolution settings

Set and select the quality of photos, press “ ” to toggle the selection, and take effect automatically.



3.4.2 Imaging settings

From left to right are: brightness, contrast, clarity. Adjust the parameters by moving upper/down button, switch the category through Ok button.



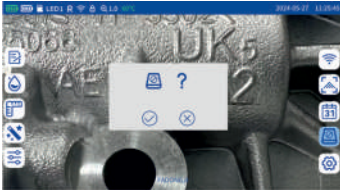
3.4.3 Date watermark setting

On / Off the date watermark on the photos according to the requirements.



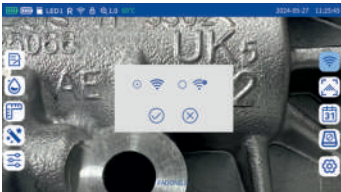
3.4.5 Format

For formatting memory cards, press " " to toggle between confirm and cancel, and press " " to confirm.



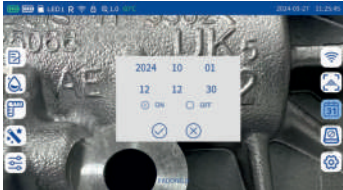
3.4.7 WIFI

Turning WiFi on or off, press " " to toggle the selection; Press " " to confirm.



3.4.4 Date/Time

Setting the real time of the device, press " " to toggle the selection; Press " " , " " to specifically adjust, long press for continuous adjustment; Press " " to



3.4.6 Version

View the current version information of the equipment.



WiFi connection usage steps:

1. Search for the "X-CAM Pro" app in the app store to download



2. Open the WiFi and mobile app of the equipment;

3. Enter the WiFi connection on the mobile terminal, and select the network named wifi_camera_xxxx for connection

4. After the WiFi connection, open the mobile app and enter the preview screen in real-time synchronization state. As shown in the figure below, after the connection, the mobile terminal can take photos and video related operations such as the device. If the preview fails, point the camera to switch icons, or turn off the APK, and open it again.

Note: When the mobile terminal is connected to WIFI in real-time synchronization, the device button will be suspended to use, and the WiFi can be restored after disconnection.

3.4.8 High temperature protection(optional)

When the camera temperature is 69 °C and below the temperature value shows green,70-79°C shows orange,80°C and above shows red.



3.4.9 Image rotation

Long press "  " to rotate, flip, mirror.

3.4.10 Zoom in/out

Long press "  " to preview the 0-4 stage cycle zoom.



3.4.11 Forward /side view switching

For switching from forward view to side view short press button no "  ".

Note: No freeze option for dual view model

4. Troubleshooting

Problem	Reason	Solution
Not Booting	Dead battery	Charge Batteries
Automatic shut-down	Insufficient battery voltage	Charge the Batteries
	Set auto-off switch function	Restart and check if the auto-off function is set
Boot screen freezing	System boot failure or battery power shortage	Remove the battery to re-install or charge, or forced shutdown by triggered the side round hole (under TF card)
The image cannot be recorded or found	The capacity of TF card is not enough	Replace TF card or delete useless files
Image stuck and failed to turn off	System stuck	Forced shutdown by triggered the side round hole (under TF card)

Thank you for your business!

WE trust, we have catered as per your expectations...



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