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› FOXWELL Y406D Elite 2-Way Articulating Borescope Camera Instruction Manual

## FOXWELL FY406D Elite

# FOXWELL Y406D Elite 2-Way Articulating Borescope Camera

Instruction Manual

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## 1. INTRODUCTION

The FOXWELL Y406D Elite is a professional-grade 2-way articulating borescope camera designed for detailed inspection in hard-to-reach areas. Featuring a dual-lens probe, high-definition IPS display, and robust construction, it is an essential tool for automotive, plumbing, HVAC, and industrial applications. This manual provides instructions for safe and effective use of your device.

# Dual Lens Articulating Endoscope

Enhanced Visibility



Image 1.1: The FOXWELL Y406D Elite Borescope Camera with its flexible probe and integrated display.

## 2. WHAT'S IN THE BOX

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Verify that all items are present upon unboxing:

- 1x Articulating Borescope (FOXWELL Y406D Elite)
- 1x 2-in-1 USB-C Cable (for charging and data transfer)
- 1x User's Manual
- 1x Hook Tip
- 1x Magnet Tip
- 1x Carrying Case Bag
- 1x 32GB MicroSD Card (pre-installed or included separately)



Image 2.1: All components included in the FOXWELL Y406D Elite package.

### 3. KEY FEATURES

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- **Ultra-Slim 0.25" (6.5mm) Dual-Lens Probe:** Allows access to extremely tight spaces, offering both front and side views.
- **220° 2-Way Articulation:** Mechanically steerable probe for comprehensive viewing angles without disassembly.
- **HD IPS Display:** Provides clear, vivid, and sharp images and videos from any viewing angle.
- **Adjustable LED Lights:** Six high-intensity LEDs illuminate dark, damp, or oily environments.
- **4X Digital Zoom:** Magnify details for closer inspection.
- **IP67 Waterproof Probe:** Designed to withstand water, dust, and oil in harsh environments.
- **Overheat Protection:** Automatic shutdown if probe temperature exceeds 70°C (158°F) to prevent damage.
- **Integrated 32GB Storage:** Capture and store over 10,000 photos or 50 videos directly on the device.
- **USB-C Connectivity:** For fast charging and efficient data transfer to a computer.
- **Ergonomic Design:** Symmetrical control knob for comfortable and precise operation.

# True Color Display

Delivers clear, accurate color reproduction for confident inspections.



Image 3.1: Overview of the borescope's display and primary features.

## 4. SETUP

### 4.1 Charging the Device

1. Connect the provided USB-C cable to the device's USB-C port.
2. Connect the other end of the cable to a standard USB power adapter (not included) or a computer's USB port.
3. The charging indicator will show the battery status. Ensure the device is fully charged before first use. A full charge provides approximately 5 hours of continuous operation.



Image 4.1: The borescope connected for charging, illustrating battery status.

## 4.2 Inserting the MicroSD Card

The device comes with a 32GB MicroSD card pre-installed or included separately. If not pre-installed:

1. Locate the MicroSD card slot on the side of the device.
2. Gently insert the MicroSD card with the gold contacts facing down until it clicks into place.

## 4.3 Powering On/Off

- To power on, press and hold the Power button until the screen illuminates.
- To power off, press and hold the Power button until the screen shuts down.

# 5. OPERATING INSTRUCTIONS

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## 5.1 Basic Controls Overview

Familiarize yourself with the control panel:

- **Power Button:** On/Off, LED light adjustment.
- **OK Button:** Confirm selection, capture photo/start recording.
- **Menu Button:** Access settings.
- **Up/Down/Left/Right Buttons:** Navigation, zoom, image rotation, lens switching.
- **Probe Joystick/Thumb Wheel:** Mechanically articulates the probe tip.



Image 5.1: The main unit of the borescope showing the display and control buttons.

## 5.2 Articulating the Probe

The probe features 2-way 220° mechanical articulation:

- Use the thumb wheel on the handle to precisely control the bending direction of the probe tip.
- The probe can bend up to 220 degrees in two directions, allowing you to navigate around obstacles and view different angles.

# 220° 2-Way Articulating

Easily steer the camera up, down, and around tight spaces to see exactly what matters.

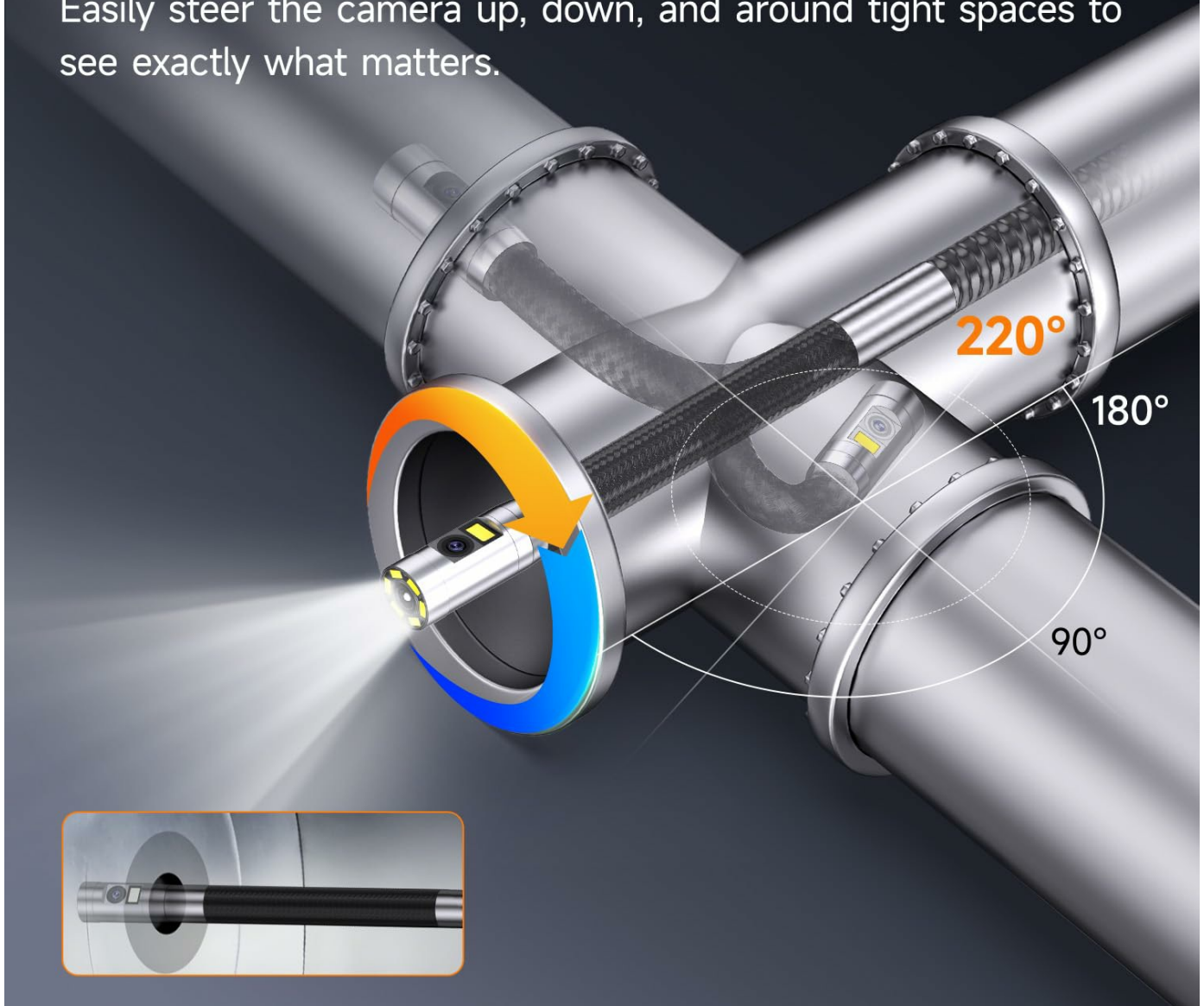


Image 5.2: The borescope probe demonstrating its 220° articulation capability.

## 5.3 Switching Lenses and Viewing Modes

The Y406D Elite features a dual-lens system (front and side camera):

- Press the designated button (often labeled with a camera icon or 'M' for Mode) to switch between Front View, Side View, or Split-Screen Dual View.
- In Split-Screen mode, both front and side camera feeds are displayed simultaneously.

# Dual Lens Articulating Endoscope

Enhanced Visibility



Image 5.3: The display showing options for front, side, and dual camera views.

## 5.4 Adjusting LED Lights

The probe tip is equipped with adjustable LED lights:

- Press the Power button briefly to cycle through different brightness levels (Off, Low, Medium, High).
- Adjust the brightness to achieve optimal visibility without glare in various inspection environments.

# Adjustable **Led Lights**

High-intensity LED lights brighten dark,damp areas for clear visibility



Image 5.4: The probe tip with adjustable LED illumination settings.

## 5.5 Using the Zoom Function

The device supports up to 4X digital zoom:

- While in live view, use the designated zoom buttons (often the Up/Down navigation buttons) to zoom in or out.
- This allows for closer examination of small details.

# Multi-Zoom Precision – Every Detail Revealed



Image 5.5: The display demonstrating the 2X and 4X zoom capabilities.

## 5.6 Capturing Photos and Videos

The Y406D Elite allows for one-touch capture:

- **To take a photo:** In live view, press the OK button once. A camera icon will briefly appear on the screen, indicating a photo has been saved.
- **To record a video:** In live view, press and hold the OK button for a few seconds. A recording indicator will appear. Press and hold the OK button again to stop recording.
- All media is saved to the internal 32GB MicroSD card.

## 5.7 Reviewing Media

- Access the album/gallery mode via the Menu button.
- Use the navigation buttons to browse through saved photos and videos.
- Press OK to view a selected item.

## 5.8 Data Transfer to Computer

- Connect the borescope to your computer using the provided USB-C cable.
- The device should appear as a removable storage device.
- You can then access and transfer photos and videos from the MicroSD card to your computer.



Image 5.6: The borescope connected to a computer for file transfer and charging.

## 6. MAINTENANCE

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### 6.1 Cleaning the Probe and Lens

- After each use, especially in dirty or oily environments, gently wipe the probe and camera lens with a soft, clean cloth.
- For stubborn grime, use a small amount of isopropyl alcohol on the cloth. Avoid abrasive materials or harsh chemicals.
- Ensure the lens is clean for optimal image clarity.

### 6.2 Storage

- Store the borescope and its accessories in the provided carrying case to protect them from dust, impacts, and extreme temperatures.
- Avoid coiling the probe too tightly to prevent damage to the internal articulation mechanism.

### 6.3 Overheat Protection

The device is equipped with a smart heat protection system:

- If the probe temperature exceeds 70°C (158°F), the device will automatically shut down to prevent damage.
- Allow the probe to cool down before resuming operation.

# Unique Overheat Protection

Protects device with auto-shutoff when probe exceeds 158°F (70°C)

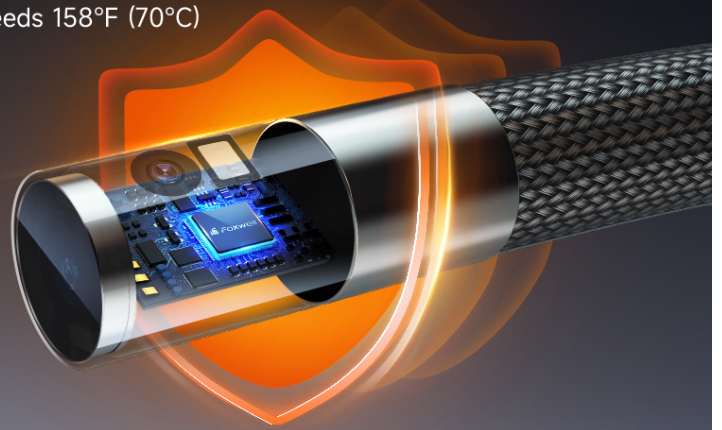
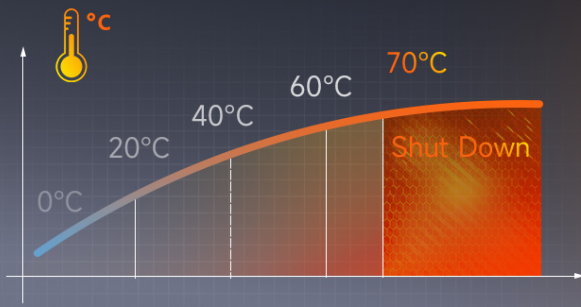


Image 6.1: Visual representation of the borescope's overheat protection mechanism.

## 6.4 IP67 Waterproof Rating

The probe is IP67 rated, meaning it is protected against dust ingress and can withstand immersion in water up to 1 meter for 30 minutes. This allows for inspection in wet or damp conditions, but the main unit is not waterproof.

# Adjustable Led Lights

High-intensity LED lights brighten dark,damp areas for clear visibility



Image 6.2: The borescope probe demonstrating its IP67 waterproof capability.

## 7. TROUBLESHOOTING

| Problem                    | Possible Cause                                                     | Solution                                                                                 |
|----------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Device does not power on   | Low battery; Device malfunction                                    | Charge the device fully. If problem persists, contact support.                           |
| No image on screen         | Camera lens dirty; Cable connection loose; Device malfunction      | Clean the camera lens. Ensure the probe cable is securely connected. Restart the device. |
| Image is blurry or unclear | Camera lens dirty; Incorrect focal distance; Insufficient lighting | Clean the camera lens. Adjust the distance to the object. Increase LED brightness.       |

| Problem                        | Possible Cause                                                                 | Solution                                                                                                         |
|--------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Probe articulation not working | Mechanical obstruction; Damaged articulation mechanism                         | Ensure no debris is blocking the probe tip. Avoid forcing the articulation. If damaged, contact support.         |
| Cannot save photos/videos      | MicroSD card full; MicroSD card not inserted correctly; MicroSD card corrupted | Delete old files or replace MicroSD card. Reinsert MicroSD card. Format MicroSD card (this will erase all data). |
| Device shuts down unexpectedly | Low battery; Overheat protection activated                                     | Recharge the device. Allow the probe to cool down if it was operating in high temperatures.                      |

## 8. SPECIFICATIONS

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- **Model:** Newly Upgraded FY406D Elite
- **Probe Diameter:** 0.25 inches (6.5mm)
- **Probe Length:** 5.3 feet (1.6 meters)
- **Articulation:** 2-Way, 220° mechanical steering
- **Camera:** Dual-lens (Front and Side)
- **Display:** HD IPS Screen
- **Zoom:** 4X Digital Zoom
- **Lighting:** 6 Adjustable LED Lights
- **Waterproof Rating:** IP67 (probe only)
- **Storage:** Built-in 32GB MicroSD card
- **Battery:** Rechargeable (approx. 5 hours continuous working)
- **Charging Port:** USB-C
- **Overheat Protection:** Automatic shutdown at 70°C (158°F)
- **Item Weight:** 2.29 pounds
- **Package Dimensions:** 12.52 x 8.86 x 2.64 inches

## 9. WARRANTY & SUPPORT

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### 9.1 Warranty Information

- **Quality Backup:** 1 Year
- **Return/Replacement Policy:** 30-Day
- For detailed warranty terms and conditions, please refer to the official FOXWELL website or contact customer service.

### 9.2 Technical Support

- **Lifetime Technical Support:** FOXWELL provides lifetime technical support for this product.
- If you encounter any issues not covered in the troubleshooting section or require further assistance, please contact FOXWELL customer support.
- Contact information can typically be found on the FOXWELL website or in the product packaging.

