HAYEAR LYSB0179Z7EN4

HAYEAR 14MP HD HDMI USB Digital Microscope Camera with 180x C-Mount Lens User Manual

Model: LYSB0179Z7EN4

1. Introduction

This manual provides detailed instructions for the setup, operation, and maintenance of your HAYEAR 14MP HD HDMI USB Digital Microscope Camera with 180x C-Mount Lens. Please read this manual thoroughly before using the product to ensure proper functionality and longevity.

2. Package Contents

Verify that all items listed below are included in your package:

- 1 x HAYEAR 14MP Microscope Camera
- 1 x 180x C-Mount Lens
- 1 x Power Supply
- 1 x Remote Control
- 1 x USB Cable
- 1 x Software Download Link (or CD)

Figure 2.1: Complete Package Contents. Includes the camera, lens, power supply, remote control, USB cable, and software disc.

3. Setup Instructions

3.1 Camera Overview

Figure 3.1: Camera and Remote Control Overview. Shows the camera unit with its ports (USB OUT, TF card, HDMI, DC IN) and control

buttons, alongside the included remote control.

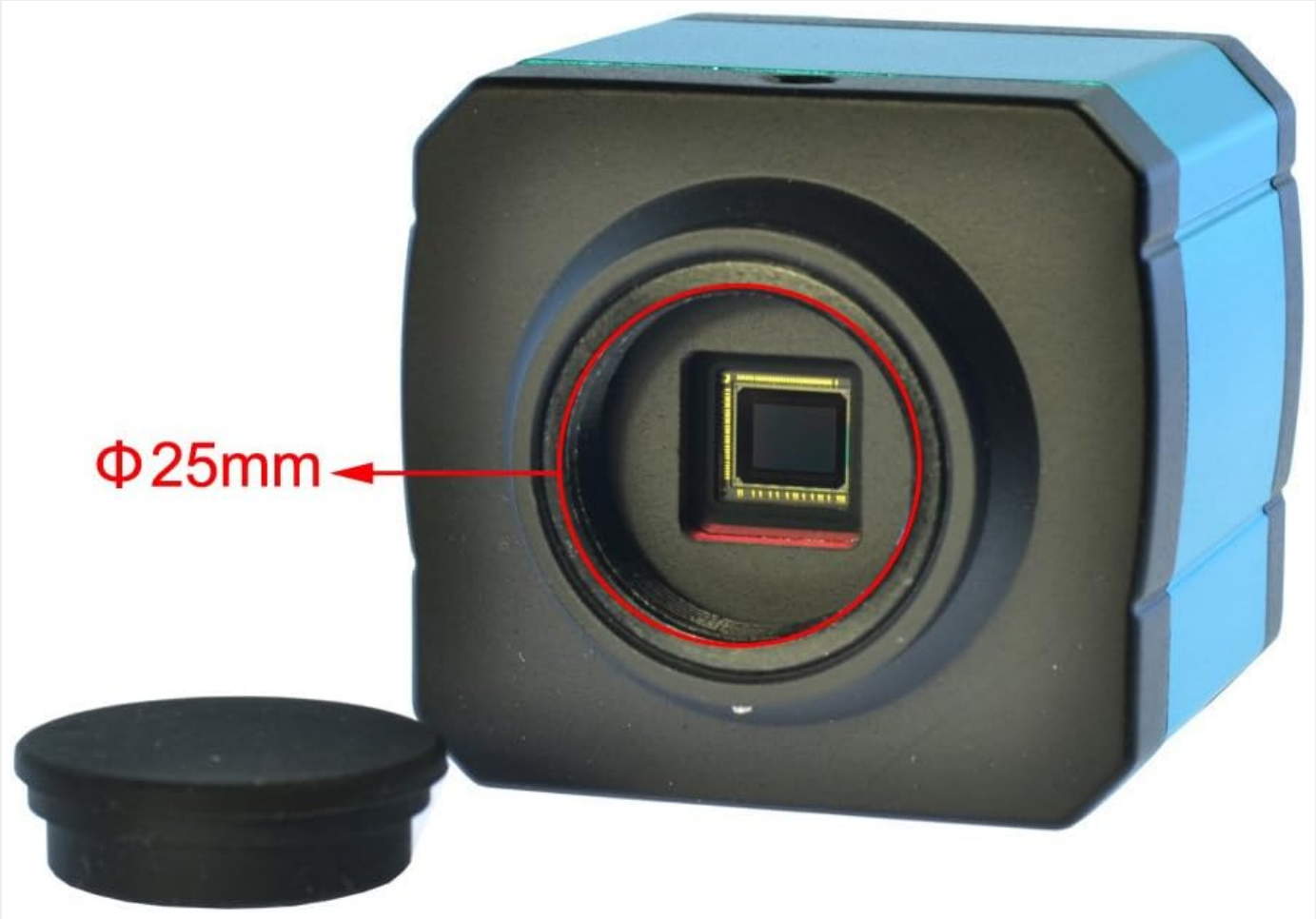

Figure 3.2: Camera Front View with C-Mount. Illustrates the C-mount interface for attaching the lens, with a diameter of Φ25mm.

3.2 Lens Assembly

The 180x C-Mount Lens consists of multiple parts. Ensure proper assembly before attaching to the camera.

Figure 3.3: 180x C-Mount Lens Dimensions. Displays the lens with its various sections, including the 0.5X adaptor, zoom ratios (0.7-4.5X), and overall dimensions (168mm length, 50mm diameter).

1. Carefully remove the protective caps from both ends of the 180x C-Mount Lens.
2. Attach the 0.5X C-mount adapter to the main lens body by screwing it clockwise until secure.
3. Align the assembled lens with the C-mount interface on the front of the camera. Gently screw the lens onto the camera until it is firmly attached. Do not overtighten.

3.3 Power and Display Connection

1. Connect the provided power supply to the DC IN port on the camera.
2. Plug the power supply into a suitable electrical outlet.
3. For HDMI output: Connect an HDMI cable (not included) from the HDMI port on the camera to an HDMI input on your monitor or TV.
4. For USB output: Connect the provided USB cable from the USB OUT port on the camera to a USB port on your computer.
5. Insert a TF card (up to 64GB, not included) into the TF card slot for image and video storage.

4. Operating Instructions

4.1 Powering On and Basic Operation

1. Ensure all connections are secure.
2. Press the ON/OFF button on the camera or the POWER button on the remote control to turn on the device.
3. If connected via HDMI, the live image from the microscope camera will appear on your display.
4. Place the object you wish to observe under the lens.

5. Adjust the focus knob on your microscope stand (if applicable) and the zoom/focus rings on the 180x C-Mount lens to achieve a clear image.

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Video 4.1: Product Demonstration. This video demonstrates the setup and basic operation of the HAYEAR microscope camera, including connecting components and adjusting focus and zoom to view a circuit board.

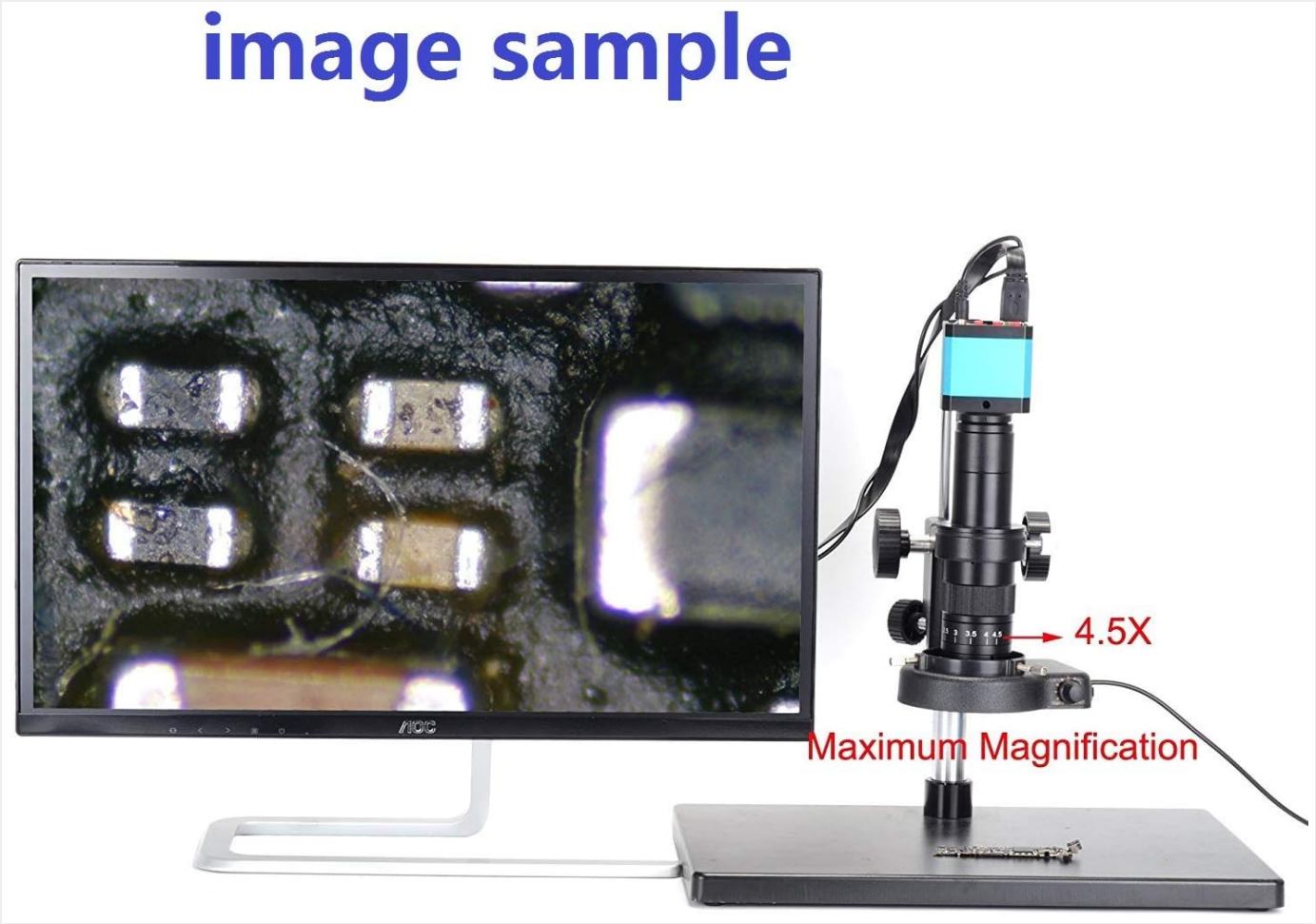

Figure 4.1: Microscope Setup with Monitor Displaying Sample. Shows the camera mounted on a stand, connected to a monitor displaying a magnified view of a circuit board.

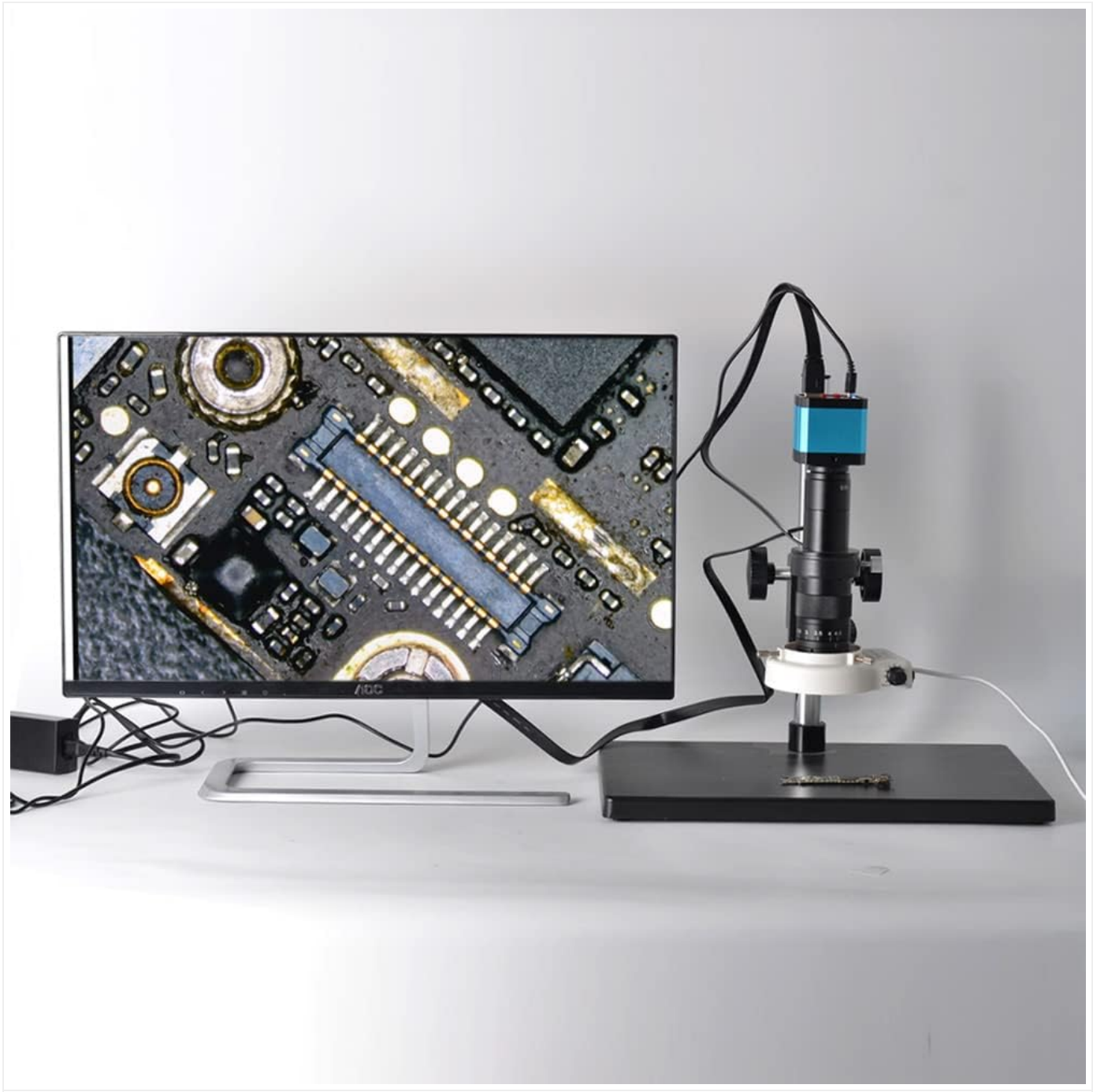

Figure 4.2: Microscope Setup with Circuit Board Sample. Another view of the microscope camera setup, focusing on a different section of a circuit board.

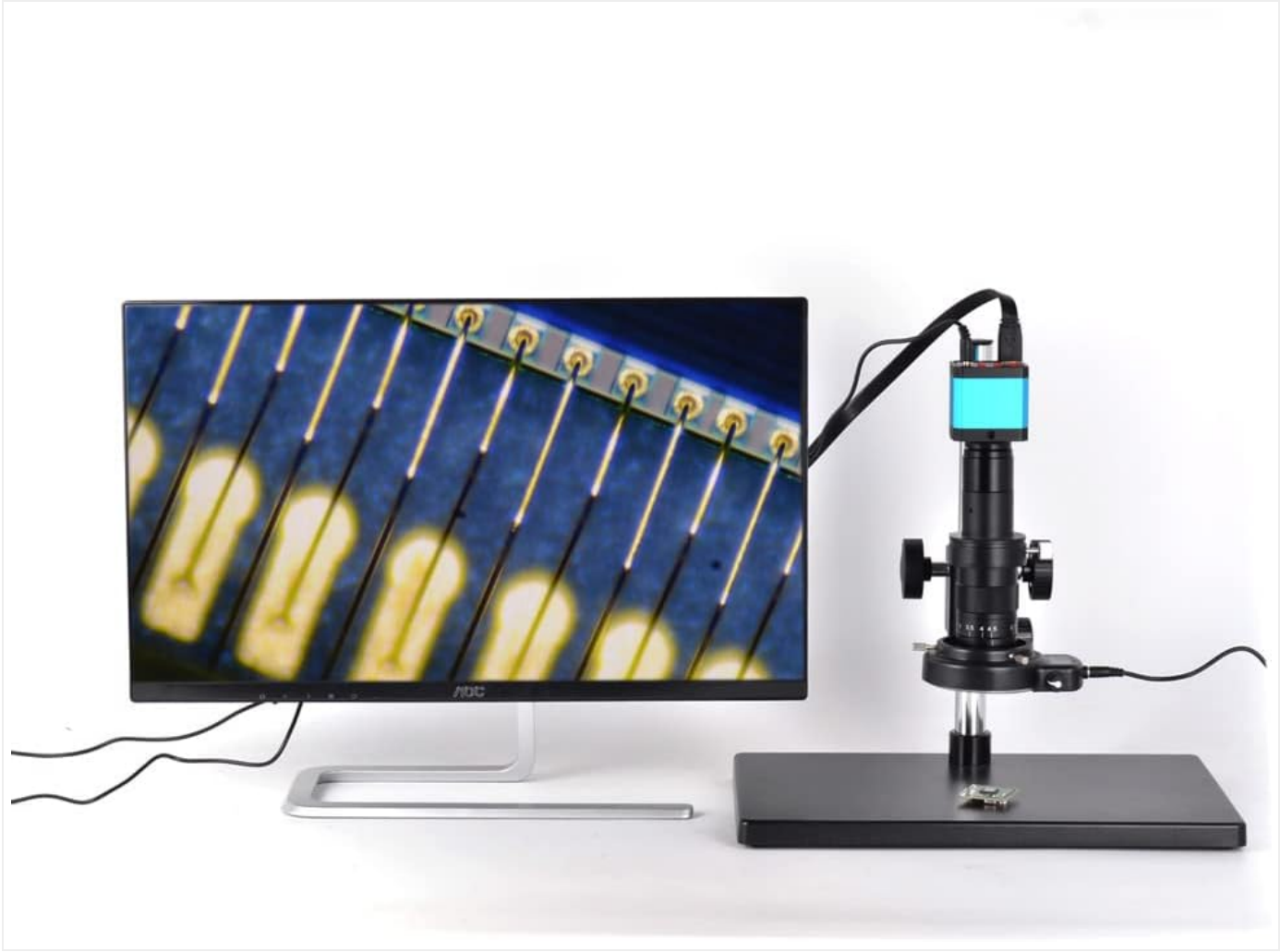

Figure 4.3: Microscope Setup with Integrated Circuit Sample. A close-up view of an integrated circuit on a monitor, captured by the microscope camera.

4.2 Menu and Settings

Use the buttons on the camera or the remote control to navigate the On-Screen Display (OSD) menu.

- **MENU:** Accesses the main menu.
- **UP/DOWN:** Navigates through menu options.
- **OK:** Confirms selections.
- **MODEL/AE:** Switches between modes or adjusts auto-exposure.
- **Photo Button (Remote):** Captures still images.
- **Video Button (Remote):** Starts/stops video recording.

Key adjustable settings include:

- **White Balance:** Auto/Manual adjustment.
- **Brightness Control:** Auto/Manual adjustment.
- **Color:** R/G/B adjustable.
- **Digital Magnification:** Up to 5 times digital zoom.
- **Cross Cursor:** Support multi-color, size adjustable.
- **Transverse and Vertical Lines:** Support multi-color, 5 pcs of transverse lines/vertical lines, movable.
- **Freeze:** Pause the live image.
- **Mirror:** Left/right, Up/Down image flip.
- **OSD Language:** English, Chinese, French, Spanish, Portuguese.

4.3 Image and Video Capture

When a TF card is inserted, you can capture images and videos directly to the card.

- Press the dedicated photo button on the remote to capture a JPG image (4320x3240 resolution).
- Press the dedicated video button on the remote to start/stop MP4 video recording (1920x1080 @ 60FPS).

4.4 USB PC Connection and Software

Connect the camera to a PC via the USB cable. The camera supports WIN7/8/10/XP systems.

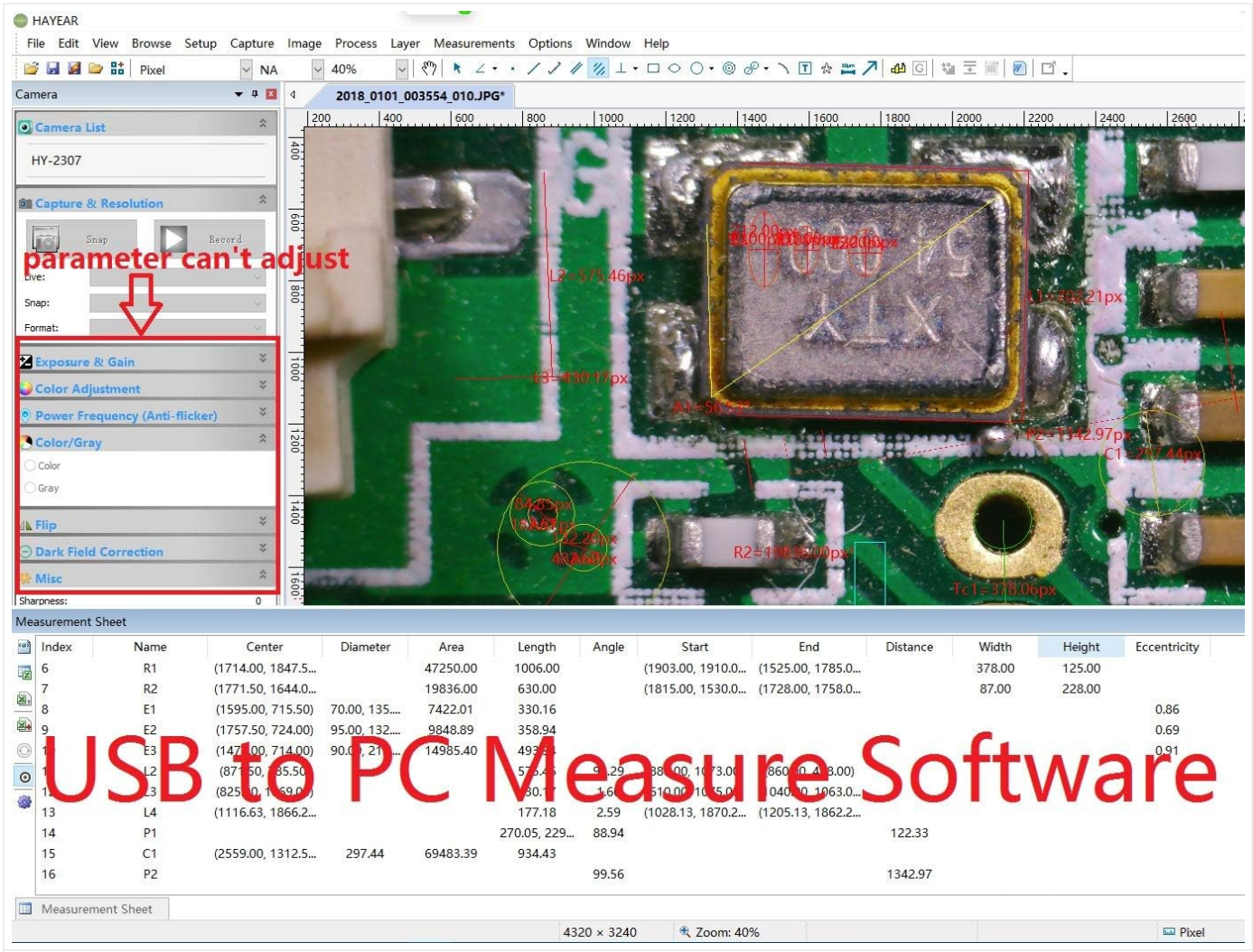

Figure 4.4: USB PC Measurement Software Interface. A screenshot of the PC software, showing image capture, resolution settings, and measurement tools. Note that some parameters like exposure and color adjustment may not be adjustable via USB out.

When using the USB output, the video resolution is 1920x1080 @ 30FPS. Note that parameters and remote control functions may not be adjustable when using USB output with PC software.

5. Maintenance

- Keep the camera and lens clean. Use a soft, lint-free cloth for cleaning optical surfaces. Avoid abrasive materials.
- Store the device in a dry, dust-free environment when not in use.
- Avoid exposing the camera to extreme temperatures or humidity.
- Do not attempt to disassemble the camera or lens, as this will void the warranty.

6. Troubleshooting

- **No image on display:** Ensure power supply is connected and turned on. Check HDMI/USB cable connections. Verify monitor input selection.
- **Image blurry:** Adjust the focus and zoom rings on the C-Mount lens. Ensure the object is within the working distance (95mm-110mm). Adjust the microscope stand's focus knob.
- **Remote control not working:** Check battery in remote. Ensure line of sight to the camera's IR receiver.
- **Cannot save images/videos:** Ensure a TF card is inserted correctly and has sufficient free space. Check if the TF card is formatted correctly (FAT32 recommended).
- **PC software issues:** Ensure correct drivers are installed. Try a different USB port or cable. Verify compatibility with your operating system (WIN7/8/10/XP).

7. Specifications

Feature	Specification
Image Sensor	14 Megapixel Color CMOS Sensor 1/2.3 inch
Effective Pixels	14 Megapixel
Pixel Size	1.43 x 1.43 µm
Frame Rate	60fps (HDMI), 30fps (USB)
Housing	Metal
White Balance	Auto/Manual
Digital Magnification	5x Digital Zoom
Brightness Control	Auto/Manual
Color Adjustment	R/G/B Adjustable
OSD Language	English, Chinese, French, Spanish, Portuguese
TF Card Interface	Max 64GB
HDMI Interface	Standard HDMI Output (Type A)
USB Interface	Standard USB 2.0 Interface (Type B)
Image Format	JPG
Image Resolution (TF Card)	4320x3240 (14MP)
Video Format	MP4
Video Resolution (TF Card)	1920x1080 @ 60FPS
Video Resolution (USB)	1920x1080 @ 30FPS
C-Mount Lens Working Distance	95mm-110mm
C-Mount Lens Zoom Ratios	6.5:1
Objective Magnification Power	0.7 - 4.5X (approx. 10 - 180X on display)
Lens Size	168mm (L) x 50mm (DIA)

Feature	Specification
Item Weight	2.3 Pounds (approx. 1.04 kg)

8. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact HAYEAR customer service directly. Keep your purchase receipt for warranty claims.