

HAYEAR HY-2307G

HAYEAR 14MP HDMI 1080P HD USB Digital Industrial Microscope Camera HY-2307G User Manual

Model: HY-2307G

1. INTRODUCTION

This manual provides comprehensive instructions for the HAYEAR 14MP HDMI 1080P HD USB Digital Industrial Microscope Camera. It is designed to assist users in setting up, operating, and maintaining the device to ensure optimal performance. This camera is suitable for various applications including jewelry appraisal, educational purposes, electronic product repair, and PCB soldering.

2. SAFETY INFORMATION

- Ensure the power supply voltage matches the camera's requirements.
- Avoid exposing the camera to extreme temperatures, humidity, or dust.
- Do not attempt to disassemble or repair the camera yourself. Contact qualified personnel for service.
- Keep the camera and accessories out of reach of children.

3. PACKAGE CONTENTS

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

- HDMI Microscope Camera (1 unit)
- 12V Power Supply (1 unit)
- USB Cable (1 unit)
- Software Disc (1 unit)
- 0.5x Reduction Lens (1 unit)
- 30.0mm Eyepiece Adapter (1 unit)
- 30.5mm Eyepiece Adapter (1 unit)

4. PRODUCT OVERVIEW

The HAYEAR HY-2307G is a 14-megapixel digital industrial microscope camera offering both HDMI and USB 2.0 outputs. It supports image capture and video recording to a TF card (for HDMI output) or directly to a PC (for USB output). The camera features an auto white balance function and various on-screen display (OSD) options for line generation and crosshair adjustments.

4.1 Camera Dimensions



Image Description: This image displays the dimensions of the HAYEAR HY-2307G camera. The camera body measures approximately 55mm in width, 54mm in height, and 55mm in depth. The lens mount extends an additional 9mm with a 4mm protrusion.

4.2 Ports and Controls



Image Description: This image shows the rear panel of the HAYEAR HY-2307G camera, highlighting its various ports and control buttons. Visible ports include USB OUT, TF card slot, HDMI, and DC IN. Control buttons are labeled ON/OFF, UP/OK, MENU, DOWN/AE, and MODEL/AE.

4.3 Included Lenses and Adapters



Image Description: This image displays the 0.5X C-mount reduction lens and two eyepiece adapters (30.5mm and 30mm) included with the HAYEAR camera. These accessories facilitate mounting the camera to various microscopes.

5. SETUP

5.1 Attaching the Camera to a Microscope

1. Select the appropriate eyepiece adapter (30mm or 30.5mm) for your microscope's photo tube or trinocular tube.
2. Attach the 0.5x C-mount reduction lens to the camera.
3. Mount the camera with the reduction lens onto the selected eyepiece adapter.
4. Insert the assembled camera and adapter into the microscope's photo tube or trinocular port.



Image Description: This image shows the HAYEAR camera mounted on a stereo microscope using the 0.5X reduction lens and an eyepiece adapter. The camera is positioned to capture images through one of the microscope's optical paths.



Image Description: This image illustrates the HAYEAR camera attached to a compound microscope. The camera is connected to the microscope's trinocular port, ready for image capture and display.

5.2 Power and Connectivity

1. Connect the 12V power supply to the camera's DC IN port.
2. For HDMI output, connect an HDMI cable from the camera's HDMI port to a compatible monitor or display.
3. For USB output, connect the USB cable from the camera's USB OUT port to a computer.
4. Insert a TF card (up to 32GB, not included) into the TF card slot for image and video storage when using HDMI output.

6. OPERATING INSTRUCTIONS

6.1 Powering On/Off

Press the **ON/OFF** button to power the camera on or off.

6.2 HDMI Output Operation

When connected to a monitor via HDMI, the camera displays a live feed. You can access the on-screen display (OSD) menu to adjust various settings.

- Press the **MENU** button to open the OSD menu.
- Use the **UP** and **DOWN** buttons to navigate through menu options.
- Press the **OK** button to select an option or confirm a setting.
- Adjustments for white balance, exposure, and color are available only when connected to a monitor via HDMI.
- The camera supports features like negative image, freeze, and line generation (5 horizontal, 5 vertical lines, adjustable color and position).

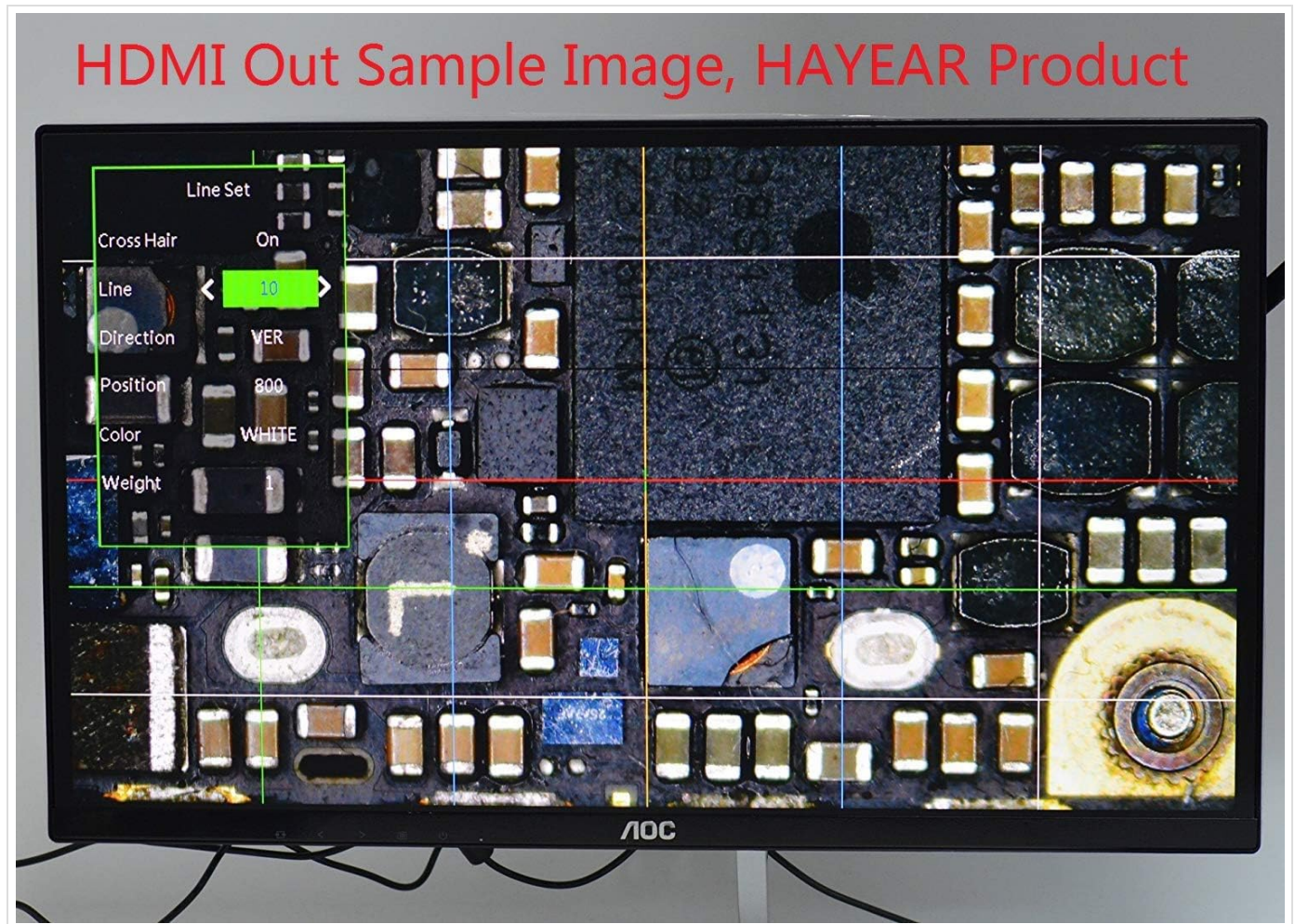
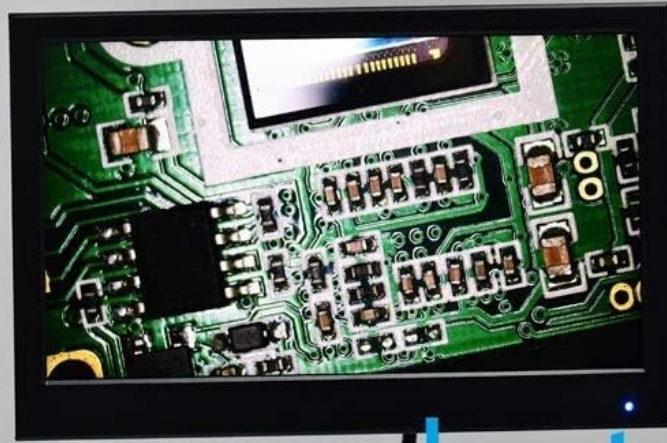


Image Description: This image shows a sample display from the HAYEAR camera via HDMI output on a monitor. The on-screen display (OSD) menu is visible on the left, allowing users to adjust settings such as line set, crosshair, line direction, position, color, and weight.

HDMI Out Sample



hayear product

Image Description: This image presents another sample of the HAYEAR camera's HDMI output, displaying a clear view of a circuit board on a monitor. The camera is connected to a microscope setup.

6.3 USB Output Operation

When connected to a computer via USB, the camera functions as a webcam. Use the provided software disc to install the necessary drivers and application for image capture and measurement.

- Ensure no TF card is inserted in the camera when using USB output.
- The USB output saves images and videos directly to your PC.
- Note that white balance, exposure, and color adjustments are automatic and cannot be manually controlled via USB connection.

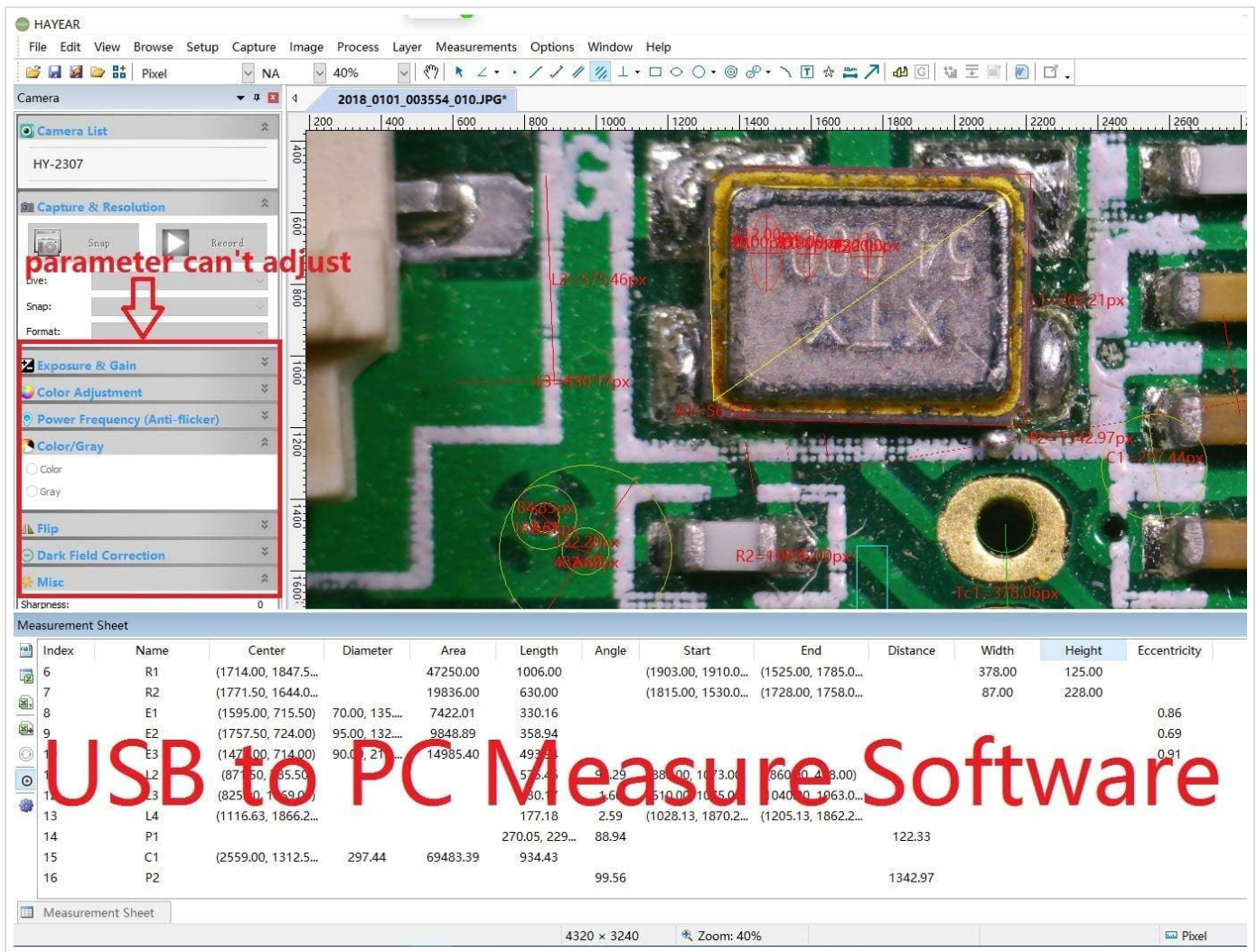


Image Description: This image displays the interface of the USB PC Measurement Software for the HAYEAR camera. It shows a magnified view of a circuit component with measurement overlays. The software allows for capturing images and performing various measurements, though some parameters like exposure and color adjustment are noted as non-adjustable.

7. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the camera body. For lenses, use a specialized lens cleaning solution and cloth.
- **Storage:** Store the camera in a cool, dry place away from direct sunlight and corrosive chemicals.
- **Handling:** Avoid dropping or subjecting the camera to strong impacts.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No image on HDMI monitor	Loose HDMI cable connection; Monitor input not set to HDMI; Power not connected.	Check HDMI cable connection; Select correct HDMI input on monitor; Ensure power supply is connected and camera is on.
Cannot adjust image settings via USB	USB output has automatic settings.	This is normal behavior. Manual adjustments are only available via HDMI output to a monitor.

Problem	Possible Cause	Solution
Cannot save images/videos to TF card via USB	TF card storage is for HDMI output only; TF card present during USB connection.	Remove TF card when using USB output. Images/videos are saved to the connected PC.
HDMI output shows 1080i instead of 1080P/60	Outdated firmware.	Perform a firmware update. Contact HAYEAR support for the correct firmware file and instructions. Ensure the TF card is formatted and only contains the firmware file during the update process.

9. SPECIFICATIONS

Feature	Description
Model	HY-2307G
Effective Pixels	14 Megapixels
Pixel Size	1.43 x 1.43 um
Image Format	JPG
Image Resolution (TF Card)	4320*3240
Video Format (TF Card)	MOV
Video Recorder (TF Card)	1920*1080 @ 60FPS
USB Video Resolution	1920*1080 @ 30FPS
White Balance	Auto
Digital Magnification	8x Digital Zoom
TF Card Interface	Max 32GB
USB Interface	Standard USB2.0 (Type B)
Output Ports	HDMI, USB2.0
Power Supply	12V
Material	Metal
OSD Languages	English, Chinese, French, Spanish, Portuguese
Compatible Devices	PC (Windows XP/7/8/10)

10. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the contact information provided with your purchase or visit the official HAYEAR website. Keep your purchase receipt as proof of purchase for warranty claims.

