

ATOMSTACK AC2

ATOMSTACK Maker Laser Engraver AC2 Camera User Manual

Model: AC2 | Brand: ATOMSTACK

1. INTRODUCTION

This manual provides comprehensive instructions for the setup, operation, and maintenance of your ATOMSTACK Maker AC2 Camera. The AC2 Camera is designed to enhance the functionality of compatible laser engravers by providing visual preview, precise positioning, real-time monitoring, and HD recording capabilities. Please read this manual thoroughly before using the product to ensure safe and efficient operation.



Figure 1.1: ATOMSTACK Maker AC2 Camera mounted on a laser engraver, showing its compact design and integration.

2. SAFETY INFORMATION

WARNING: This product is designed for use with Laser Class 4 devices. Always observe all safety precautions associated with laser engravers, including wearing appropriate eye protection and ensuring proper ventilation. Misuse can result in serious injury.

- Ensure the laser engraver is powered off and disconnected from the power source before installing or removing the AC2 Camera.
- Do not look directly into the laser beam or its reflection.
- Operate the laser engraver and camera in a well-ventilated area.
- Keep children and pets away from the operating area.
- Refer to your laser engraver's manual for additional safety guidelines.

3. PACKAGE CONTENTS

Carefully unpack the box and verify that all items listed below are present and undamaged. If any items are missing or damaged, please contact ATOMSTACK customer support.



Figure 3.1: Overview of the ATOMSTACK Maker AC2 Camera package contents.

- ATOMSTACK Maker AC2 Camera Unit
- Mounting Bracket and Screws
- USB Cable
- Calibration Card
- User Manual
- Other accessories (e.g., measuring tape, silica gel packets)



Figure 3.2: The retail packaging for the ATOMSTACK Maker AC2 Camera.

4. SETUP

4.1 Physical Installation

1. **Mounting the Camera:** Attach the AC2 Camera to your laser engraver's frame using the provided mounting bracket and screws. Ensure the camera is securely fastened and positioned to have a clear view of the entire working area.
2. **Connect Power:** Connect the camera to a power source using the provided USB cable.

AtomStack AC2 wireless camera

Bring wise eyes to engraver, recording every single amazing creation



Figure 4.1: The AC2 Camera integrated with a laser engraver, illustrating its key functionalities.

4.2 Software Installation and Connection

The ATOMSTACK Maker AC2 Camera is primarily designed to work with LightBurn software. Ensure you have LightBurn installed on your computer.

1. **Download Software/Drivers:** If necessary, download the latest drivers or software from the official ATOMSTACK website or use the QR code provided in the manual: <http://qr71.cn/olsRvn/qodW6yZ>.
2. **Connect to Computer:** Connect the camera to your computer via USB.
3. **LightBurn Setup:**
 - Open LightBurn and navigate to the camera settings.
 - Select the ATOMSTACK AC2 Camera from the list of available devices.
 - Follow the on-screen prompts for camera calibration. This typically involves placing a calibration card on the engraver bed and capturing images from different positions.

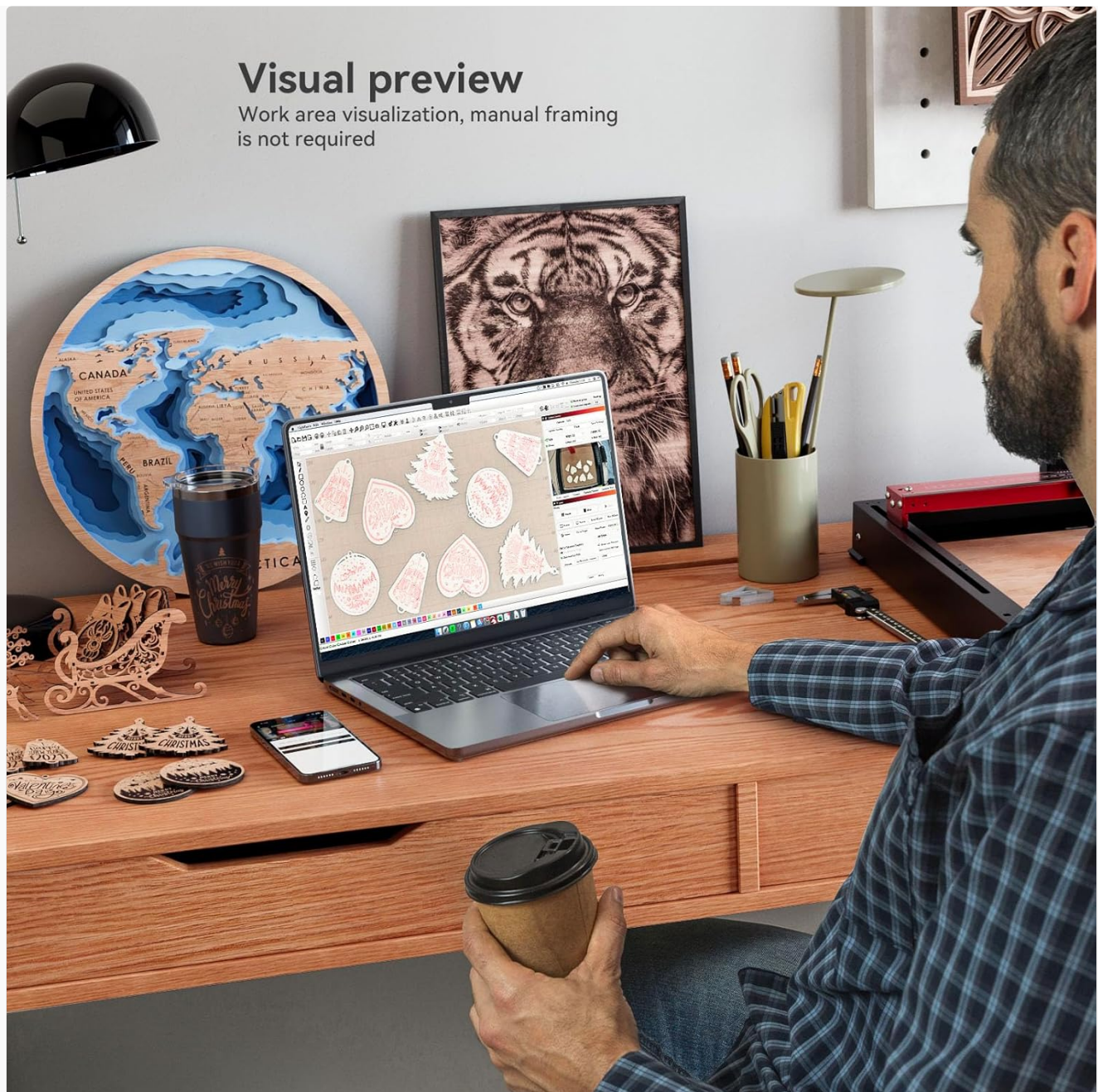


Figure 4.2: Visual preview functionality within LightBurn, enabling precise work area visualization.

Note: Proper calibration is crucial for accurate positioning and visual preview features. Refer to the LightBurn documentation or online tutorials for detailed calibration steps.

5. OPERATING INSTRUCTIONS

5.1 Visual Preview

The AC2 Camera provides a real-time visual feed of your engraver's work area directly within LightBurn. This eliminates the need for manual framing and allows for precise placement of designs on your material.

- Place your material on the engraver bed.
- In LightBurn, activate the camera view to see the live feed of your material.
- Drag and drop your design onto the material image in the software for accurate positioning.

5.2 Batch Engraving

Utilize the camera's capabilities for efficient batch processing. You can engrave or cut multiple objects of different

shapes and sizes in a single operation.



Figure 5.1: Batch engraving setup, allowing for simultaneous processing of multiple items.

5.3 Precise Positioning

The AC2 Camera features object recognition, allowing it to auto-locate the working area with positioning accuracy up to 1mm. This ensures your engravings are placed exactly where intended.

Precise positioning

Recognize the object position
Auto locate the working area with positioning accuracy up to 1mm

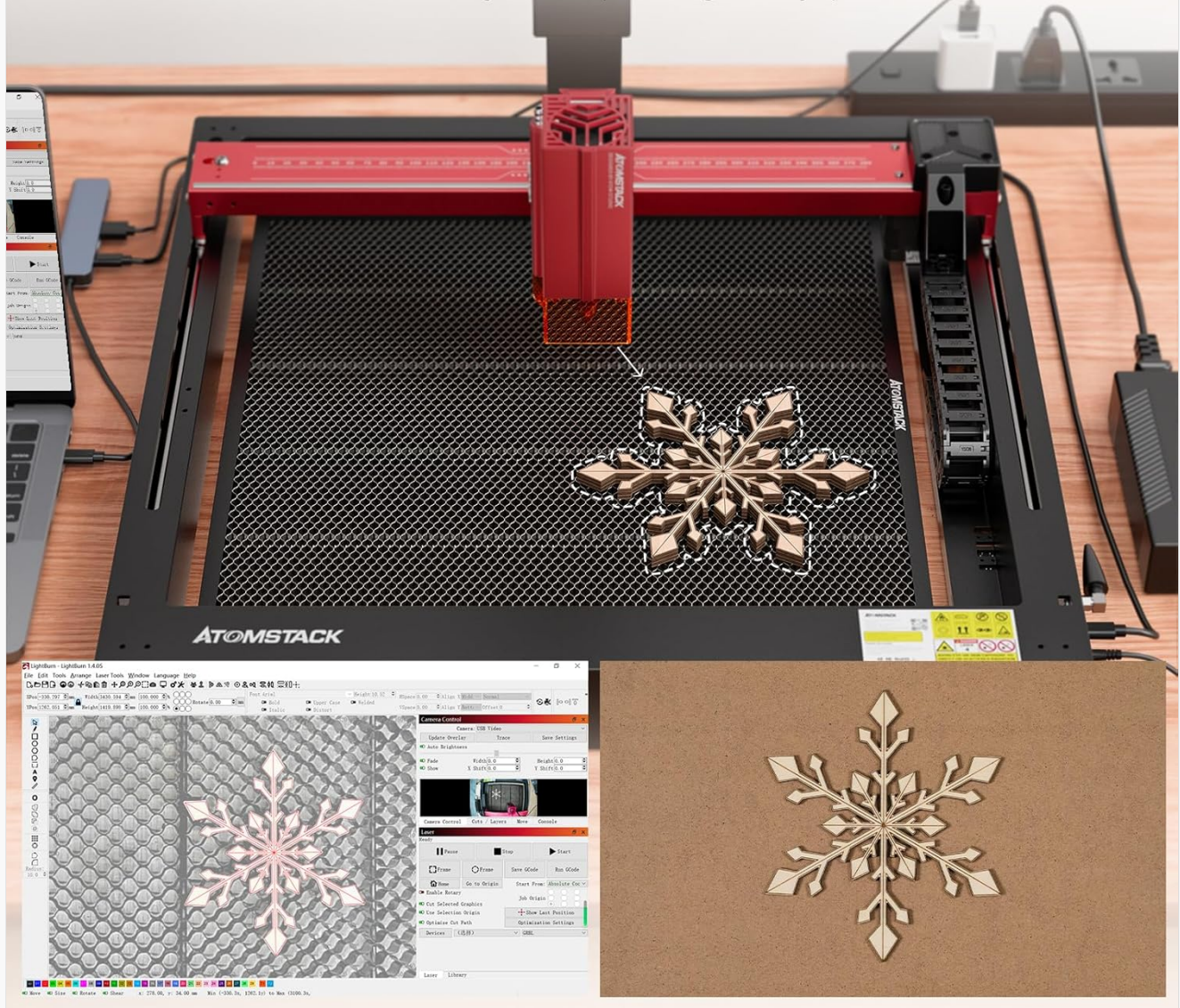


Figure 5.2: Demonstration of precise positioning, ensuring accurate design placement.


5.4 Real-time Monitoring

Monitor the engraver's working state in real-time for safety and convenience. The camera supports dual WiFi bands (2.4GHz & 5GHz) for wireless connection, allowing you to view the process remotely on your smartphone or tablet.

Real time monitoring

Real time monitor the engraver working state, safe and leisurely
Dual WiFi Bands of 2.4GHz & 5GHz for wireless connection


Safety
monitoring


work
progress checking


process
recording


Dual WiFi Bands
2.4GHz & 5GHz



Figure 5.3: Remote monitoring of the engraving process via a mobile device.

5.5 HD Recording

Record the entire creative process in high definition. This feature allows you to capture and share your engraving projects or create time-lapse videos.

HD recording

Record the creative process and share your brilliant ideas at any time.

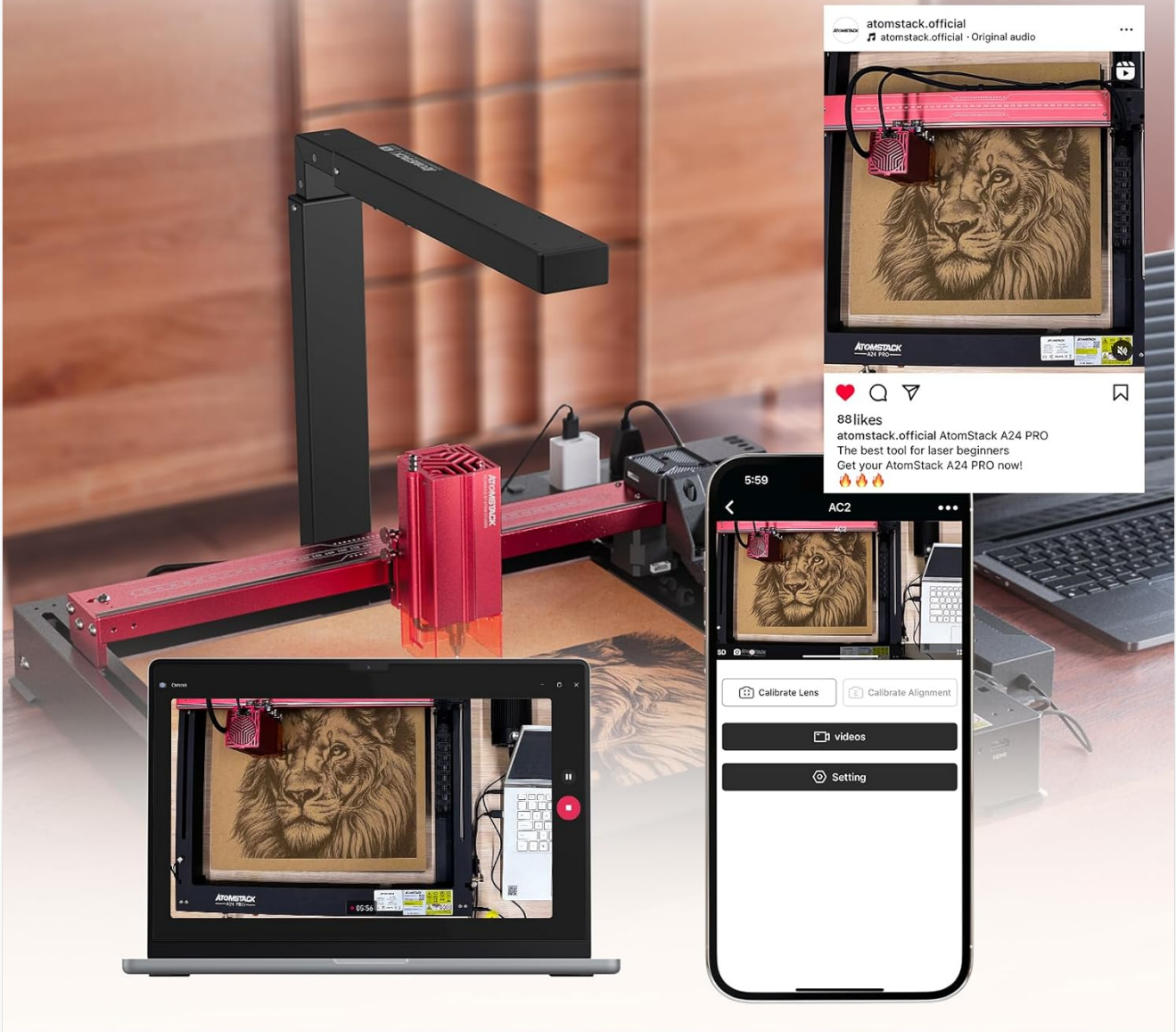


Figure 5.4: HD recording capabilities for documenting and sharing engraving projects.

6. MAINTENANCE

- **Cleaning:** Regularly clean the camera lens with a soft, lint-free cloth. Avoid abrasive materials or harsh chemicals.
- **Firmware Updates:** Check the ATOMSTACK official website periodically for firmware updates to ensure optimal performance and access to new features.
- **Storage:** When not in use, store the camera in a clean, dry environment away from direct sunlight and extreme temperatures.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
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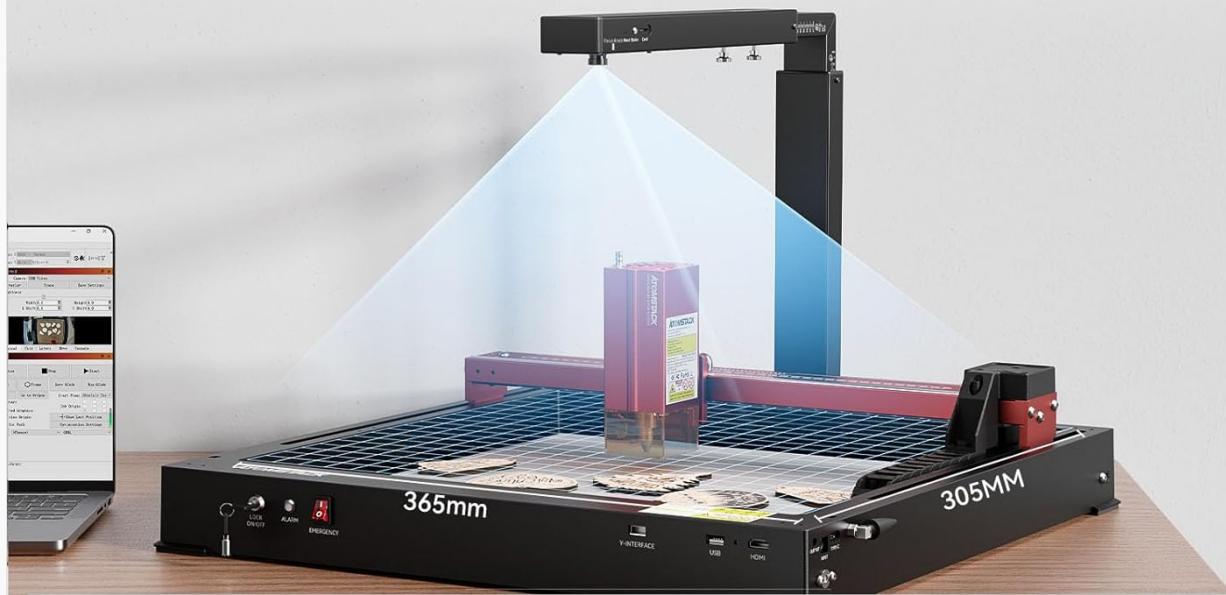
Problem	Possible Cause	Solution
Camera not detected by LightBurn.	USB connection issue, driver not installed, camera not powered.	Check USB cable connection. Ensure camera is powered on. Install necessary drivers from ATOMSTACK website. Restart LightBurn and computer.
Inaccurate positioning.	Improper camera calibration.	Recalibrate the camera in LightBurn following the calibration guide. Ensure the calibration card is flat and correctly positioned.
Poor image quality.	Dirty lens, insufficient lighting, incorrect camera settings.	Clean the camera lens. Ensure adequate lighting in the work area. Check camera settings in LightBurn for brightness/contrast adjustments.
Wireless connection issues.	Weak Wi-Fi signal, incorrect network settings.	Ensure the camera is within range of your Wi-Fi router. Verify Wi-Fi credentials and settings. Try restarting the camera and router.

8. SPECIFICATIONS

Feature	Detail
Model Number	ATOMSTACK Maker AC1 (AC2 variant)
Product Dimensions	3.94 x 3.93 x 3.94 inches
Item Weight	4.14 pounds
Color	Black
Compatibility	Compatible with 95% of frame-type laser engravers on market (max working area 400*400mm). Optimized for LightBurn software.
Connectivity	Wireless (Dual WiFi Bands 2.4GHz & 5GHz), USB
Features	Visual Preview, Batch Engraving, Precise Positioning (up to 1mm accuracy), Real-time Monitoring, HD Recording, Infrared Fill Light (implied by comparison image).

High adaptability

Compatible with 95% of frame-type laser engravers on market
The maximum working area can reach up to **400*400mm**



*Third-party brand machines need to purchase lightburn software to work with

Figure 8.1: High adaptability of the AC2 Camera with various laser engraver models.

New upgrades AC2 VS Other





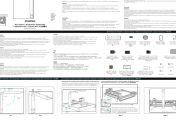
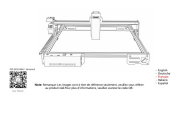
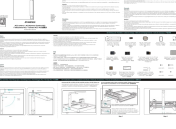

		
	AtomStack AC2	Other
Wireless connection	✓	✗
Real-time monitoring	✓	✗
HD recording	✓	✗
Infrared fill light	✓	✗
Visual preview	✓	✓
Compatible with Lightburn	✓	✓
Quick installation	✓	✗

Figure 8.2: Feature comparison: ATOMSTACK AC2 vs. Other Cameras.

9. WARRANTY AND SUPPORT

ATOMSTACK provides a warranty for this product. Please refer to the warranty card included in your package or visit the official ATOMSTACK website for detailed warranty terms and conditions. For technical support, troubleshooting assistance, or spare parts, please contact ATOMSTACK customer service through their official channels.

Official ATOMSTACK Store on Amazon: [ATOMSTACK Official Store](#)

	<p>ATOMSTACK MAKER AC1 User Manual: Setup, Calibration, and Operation Guide</p> <p>Comprehensive user manual for the ATOMSTACK MAKER AC1 camera, detailing installation, lens calibration, camera alignment, positioning, video recording, and troubleshooting for laser engraving machines. Learn how to integrate and optimize your ATOMSTACK camera with LightBurn software.</p>
	<p>ATOMSTACK MAKER AC1 Camera User Manual: Setup, Calibration, and Operation Guide</p> <p>Comprehensive user manual for the ATOMSTACK MAKER AC1 camera, covering installation, calibration, positioning, video recording, and troubleshooting for laser engraving machines.</p>
	<p>ATOMSTACK AC2 Camera: Installation, Calibration, and User Guide</p> <p>Comprehensive guide for the ATOMSTACK AC2 camera, covering installation, assembly, calibration steps, packing list, and frequently asked questions for precise laser engraving positioning with LightBurn software.</p>
	<p>ATOMSTACK A5/A10/A20 PRO V2 Laser Engraver User Manual</p> <p>Comprehensive user manual for the ATOMSTACK A5, A10, and A20 PRO V2 laser engravers, covering safety, assembly instructions, software setup (LightBurn, LaserGRBL), operation, maintenance, and troubleshooting.</p>
	<p>ATOMSTACK AC2 Camera User Manual and Installation Guide</p> <p>This guide provides essential information on the ATOMSTACK AC2 camera, including its features, packing list, assembly, installation, and troubleshooting tips for optimal use with LightBurn software.</p>
	<p>ATOMSTACK R30 V2 Laser Module Installation Manual</p> <p>Detailed installation guide for the ATOMSTACK R30 V2 laser module, covering safety, setup, operation parameters, and warranty information for laser engraving systems.</p>