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ATOMSTACK A6 Pro

ATOMSTACK A6 Pro Laser Engraving Machine User Manual

Model: A6 Pro | Brand: ATOMSTACK

1. Introduction

The ATOMSTACK A6 Pro is a high-performance laser engraving and cutting machine designed for precision and ease of use.Featuring a 6W ultra-high performance laser module and advanced blue-ray laser point compression technology,it offers exceptional cutting ability and fine engraving detail. Its integrated design ensures quick setup,making it suitable for various creative and professional applications.

Figure 1.1: The ATOMSTACK A6 Pro Laser Engraving Machine, showcasing its compact and integrated design.

2. Safety Information and Warnings

WARNING: Laser engraving machines emit powerful laser radiation. Improper use can cause serious injury, including eye damage and skin burns.Always adhere to the following safety guidelines:

- **Eye Protection:** Always wear appropriate laser safety goggles when operating the machine. Never look directly into the laser beam or its reflection.
- **Ventilation:** Operate the machine in a well-ventilated area to dissipate fumes and smoke produced during engraving and cutting. Consider an exhaust system.
- **Fire Hazard:** Laser processing can ignite flammable materials. Do not leave the machine unattended during operation. Keep a fire extinguisher nearby.
- **Material Compatibility:** Only engrave or cut materials specified as safe for laser processing. Avoid materials that produce toxic fumes or can easily ignite.
- **Children and Pets:** Keep children and pets away from the machine during operation.
- **Power Supply:** Use only the specified power adapter (AC 24V 5A) for the machine.
- **Emergency Stop:** Familiarize yourself with the location and operation of the emergency stop button.

Figure 2.1: Product information label including critical safety warnings regarding direct or scattered radiation.

3. Setup and Installation

The ATOMSTACK A6 Pro is designed for minimal setup, allowing you to start working quickly.

3.1 Unpacking

1. Carefully remove the machine and all components from the packaging.
2. Verify that all parts are present according to the packing list (refer to your product's specific packing list).

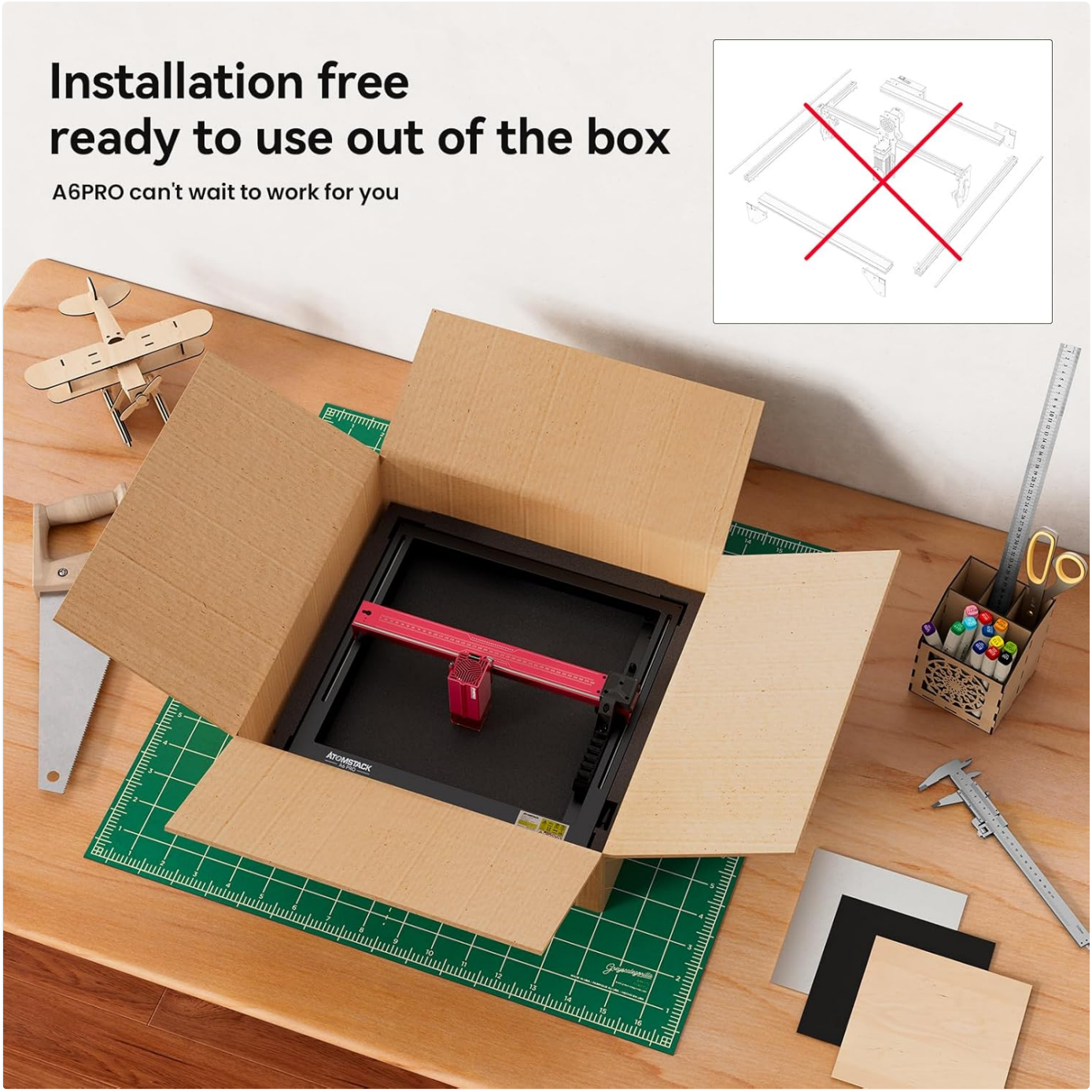

Figure 3.1: The ATOMSTACK A6 Pro is designed for immediate use upon unboxing, requiring no complex assembly.

3.2 Initial Placement and Connection

1. Place the machine on a stable, level, and non-flammable surface. Ensure adequate space around the machine for ventilation and operation.
2. Connect the power adapter to the machine and then to a suitable power outlet.
3. Ensure the laser module is securely seated and the tank chain bundling for cables is properly aligned to prevent tangling.

Figure 3.2: The tank chain bundling system ensures smooth and tangle-free cable operation, enhancing machine longevity.

4. Operating Instructions

The ATOMSTACK A6 Pro offers versatile engraving and cutting capabilities.

4.1 Software Installation and Connection

The ATOMSTACK A6 Pro is compatible with Atomstack's self-developed PC software and supports various control methods.

1. Download and install the latest version of Atomstack's PC software from the official website or use the provided mobile application.
2. Connect the machine to your computer via USB or Wi-Fi (if supported by your model). For mobile app control, connect your device to the machine's hotspot.
3. Ensure the software recognizes the machine before proceeding.

Figure 4.1: Overview of the Atomstack self-developed PC software, designed for user-friendly interaction and creative projects.

4.2 Focusing the Laser

The A6 Pro features a fixed focusing design for quick and accurate focusing.

- Place your material on the engraving bed.
- Adjust the laser module height according to the material thickness until the laser spot is at its smallest and sharpest point. This typically takes less than 10 seconds.
- For precise positioning, utilize the cross-positioning system for visual edge finding and object alignment.

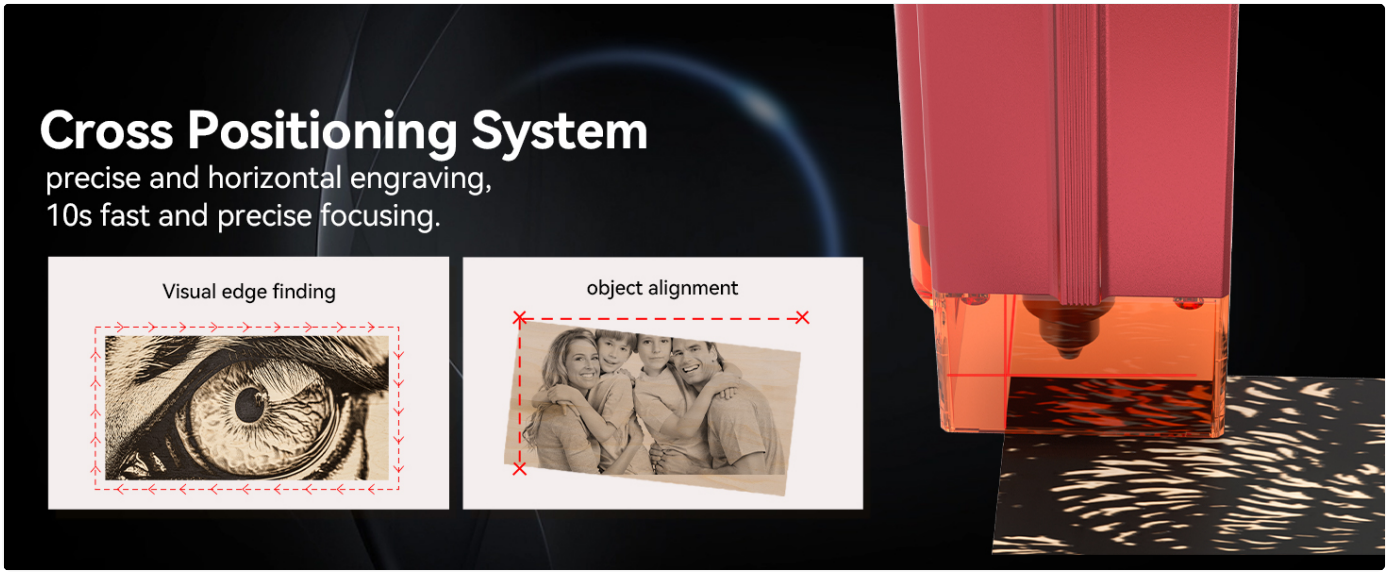

Figure 4.2: The cross-positioning system aids in precise and horizontal engraving, allowing for quick and accurate focusing.

4.3 Engraving and Cutting

The A6 Pro is capable of engraving and cutting various materials with high precision.

- **Material Preparation:** Ensure your material is clean and securely placed on the engraving bed.
- **Design Import:** Import or create your design within the software.
- **Parameter Settings:** Adjust laser power, speed, and passes based on the material type and desired outcome. The 6W laser can cut through 3mm poplar wood, 3mm black acrylic, 3mm poplar plywood, and laser vinyl.
- **Start Operation:** Initiate the engraving or cutting process from the software. Monitor the machine closely during operation.

Figure 4.3: The ATOMSTACK A6 Pro is suitable for engraving and cutting a variety of materials including basswood, acrylic, pine wood, paulownia, bamboo, and leather.

Figure 4.4: The A6 Pro demonstrates significantly faster engraving speeds compared to traditional frame machines, enhancing work efficiency.

5. Maintenance

Regular maintenance ensures the longevity and optimal performance of your ATOMSTACK A6 Pro.

- **Laser Module Cleaning:** The non-clogging laser module is designed to resist lens pollution. However, periodic inspection and gentle cleaning of the laser lens with a suitable optical cleaner and lint-free cloth are recommended to maintain optimal laser performance.
- **Rail Cleaning:** Keep the X-axis metal double guide rails clean and free of dust and debris to ensure smooth and precise movement.
- **General Cleaning:** Wipe down the machine's exterior with a soft, dry cloth. Avoid using abrasive cleaners or solvents.
- **Cable Inspection:** Periodically check the tank chain bundled cables for any signs of wear or damage.

6. Troubleshooting

This section addresses common issues you might encounter with your ATOMSTACK A6 Pro.

Problem	Possible Cause	Solution
Machine not powering on.	Power cable not connected; faulty power adapter; power switch off.	Ensure power cable is securely connected. Check power outlet. Verify power switch is in the ON position.
Laser not firing or weak.	Laser module not properly focused; dirty lens; incorrect software settings; laser module malfunction.	Re-focus the laser. Clean the laser lens. Check laser power settings in software. Contact support if issue persists.
Engraving/cutting results are inaccurate or distorted.	Loose belts/rails; material not flat; incorrect software settings; vibrations.	Check for any loose components or debris on the guide rails. Ensure material is flat and secured. Verify design and parameter settings in software. Minimize external vibrations.
Software not connecting to machine.	Incorrect USB port; driver issues; Wi-Fi connection problems.	Try a different USB port. Reinstall drivers. For Wi-Fi, ensure you are connected to the machine's hotspot. Restart both machine and computer/device.

7. Specifications

Feature	Detail
Model	A6 Pro
Brand	ATOMSTACK
Laser Power	6W (Optical Output)
Laser Spot Size	0.05 x 0.05 mm (Ultra-fine)
Engraving Area	370 x 310 mm
Mechanical Precision	Up to 0.02 mm
Maximum Engraving Speed	600 mm/s
Power Input	AC 24V 5A
Product Dimensions	60 x 60 x 17 cm
Item Weight	8.26 kg
Motherboard	Self-developed 32-bit ESP32 motherboard
Supported Materials (Cutting)	3mm Poplar Wood, 3mm Black Acrylic, 3mm Poplar Plywood, Laser Vinyl
Supported Materials (Engraving)	Basswood, Acrylic, Pine wood, Paulownia, Bamboo, Leather, etc.

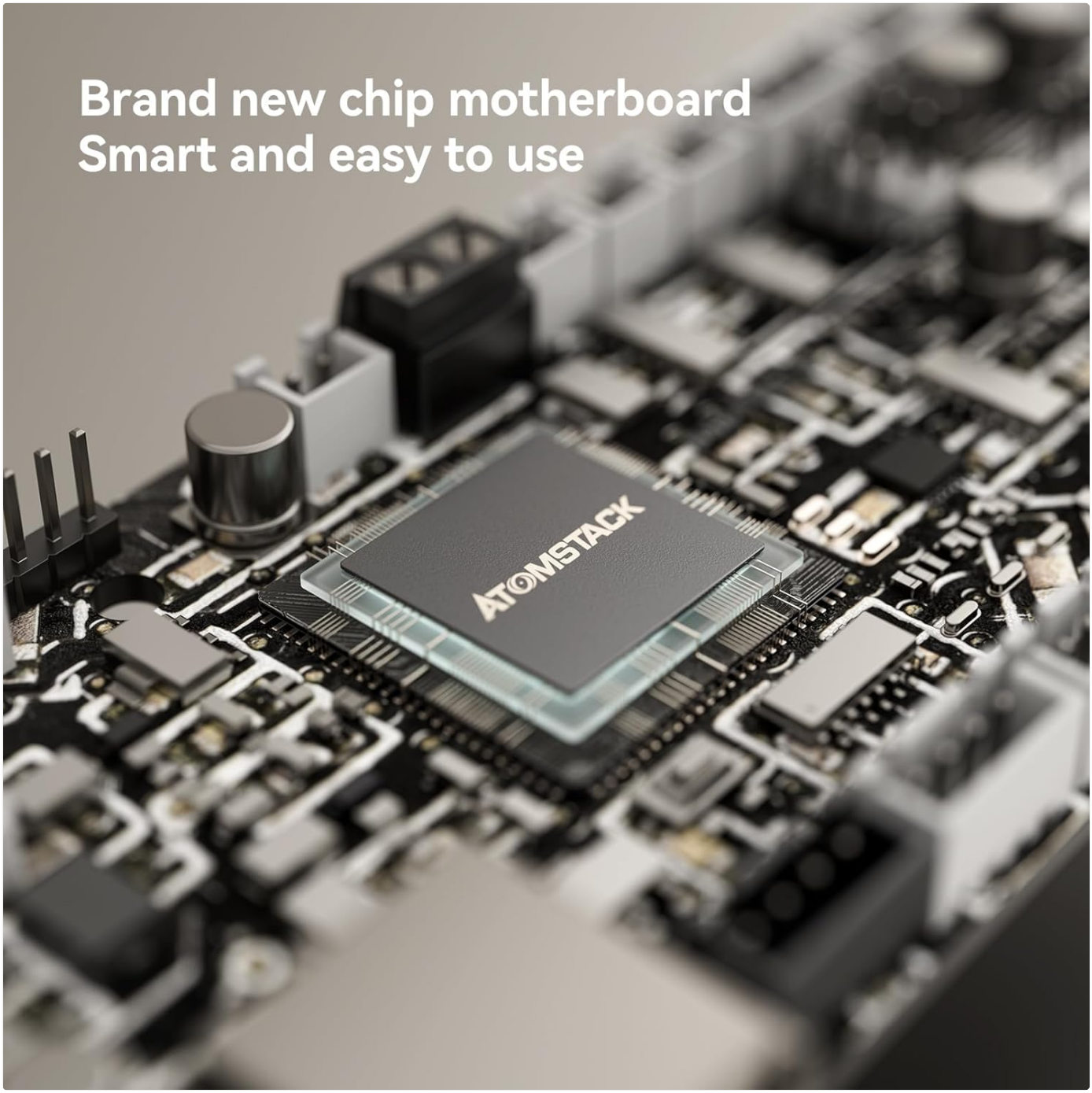

Figure 7.1: The ATOMSTACK A6 Pro features an upgraded self-developed 32-bit motherboard for faster data processing.

Figure 7.2: The unibody frame and modular assembly contribute to a mechanical precision of up to 0.02mm.

8. Warranty and Support

ATOMSTACK provides customer support and warranty services for its products.

- **Warranty Information:** Please refer to the warranty card included with your product or visit the official ATOMSTACK website for detailed warranty terms and conditions.
- **Technical Support:** For technical assistance, troubleshooting beyond this manual, or spare parts inquiries, please contact ATOMSTACK customer support.
- **Contact Email:** support@atomstack.com
- **Manufacturer:** Shenzhen Atomstack Technologies Co., Ltd.
- **Address:** 17th Floor, Building 3A, Phase II, Intelligent Park, No.76.Baohe Avenue, Baolong Street, Longgang Dist., Shenzhen, 518172China.

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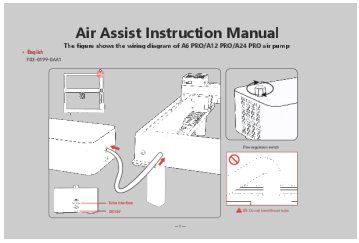
Related Documents - A6 Pro

	[ATOMSTACK A5 Pro Laser Engraving Machine Manual] Comprehensive user manual for the ATOMSTACK A5 Pro laser engraving machine, covering safety, software installation (LaserGRBL and LightBurn), operation, and troubleshooting.
	[ATOMSTACK MAKER R1 Rotary Chuck User Manual and Installation Guide] This comprehensive guide details the installation, connection, and operation of the ATOMSTACK MAKER R1 Rotary Chuck for laser engraving machines. It covers packing contents, setup procedures, software configuration with LightBurn, and essential notes for engraving cylindrical, spherical, and other shaped objects.
	[ATOMSTACK Air Assist Kit User Manual] User manual for the ATOMSTACK Air Assist Kit, providing installation, usage, and precautions for ATOMSTACK laser engraving machines.
	[AtomStack APP User Manual: Connecting and Operating Your Laser Engraver] A comprehensive user manual for the AtomStack APP, guiding users through software download, device connection, network setup, functional descriptions, creation and engraving processes, software and firmware updates, camera integration, video recording, password management, and camera reset procedures for AtomStack laser engravers.
	[ATOMSTACK P7 Series Laser Engraver Installation Manual] Comprehensive installation manual for the ATOMSTACK P7 Series Laser Engraver, detailing safety precautions, assembly steps, and product usage guidelines. Learn how to safely set up and operate your laser engraving machine.
	[P7 M30 Laser Engraving and Cutting Parameters] Comprehensive parameter tables for AtomStack P7 M30 laser engraver and cutter, detailing settings for various materials like Basswood, Hardwood, Bamboo, Acrylic, Kraft Paper, Mirrors, and Leather for both engraving and cutting operations.



[pdf] User Manual Diagram

F60 Air Assist User Manual five languages AtomStack User Guides Laser Engraver Set drive google file d 13xWa6dCuCVzrGmOl64mHtR3TK9MdrBg6 view |||

Air Assist Instruction Manual English The figure shows the wiring diagram of **A6 PRO**/A12 PRO/A24 PRO air pump F03-0199-0AA1 Tube interface DC12V Tube interface DC12V 1 Flow regulation switch EN: Do not bend the air tube DC diameter 3.5mm terminal, connected to the main board air pump power o...

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6 1208 AtomStack B3 Dustproof Protective Box User Manual atomstack net cdn shop files |||

EN: B3 protective box/ DE: B3 Schutzbox FR: Bote de protection B3 / IT: Scatola di protezione B3 ES: ... without prior notice. The B3 Protective Box is currently only compatible with the following models:**A6 Pro**/ A12 Pro/ A24 Pro/ X12 Pro/ X24 Pro DE Verzichtserklrung Dieses Produkt ist kein Spielzeug un...

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X12 X24 PRO Display Screen User Manual F03-0238-0AA1 Note: The pictures are for reference only, and ... o the crosshair position. 9.1.4 This function is disabled by default for the auxiliary positioning. **A6 PRO** does not have the auxiliary positioning function, while other models have it. 9.2 How to Cali...

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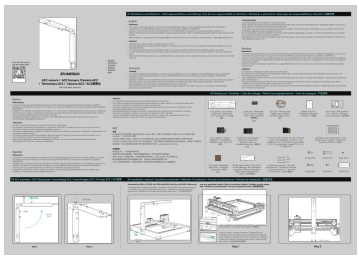

ATOMSTACK AC2 Camera: Installation, Calibration, and User Guide

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.

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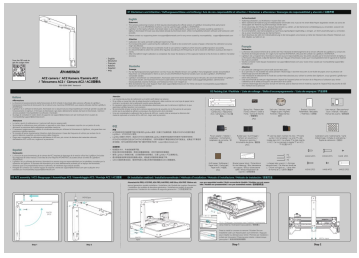

ATOMSTACK AC2 Camera User Manual and Installation Guide

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.

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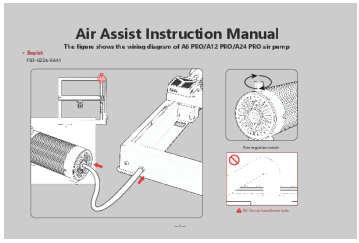

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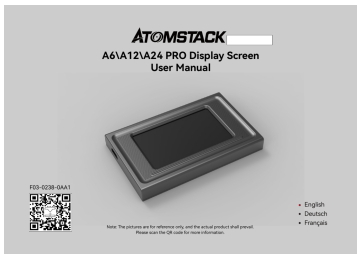

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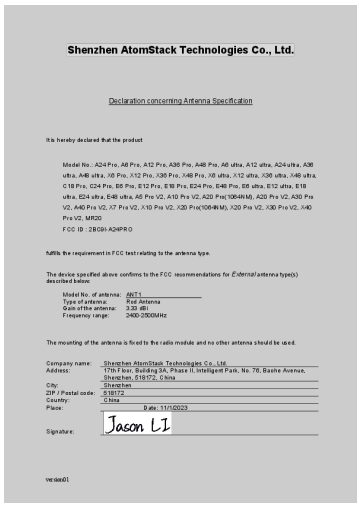

[Antenna Specification Declaration for AtomStack Products]

Official declaration from Shenzhen AtomStack Technologies Co., Ltd. detailing antenna specifications, FCC compliance, and supported product models including A24 Pro, A6 Pro, and others, for external rod antennas with 3.33 dBi gain and 2400-2500MHz frequency range.

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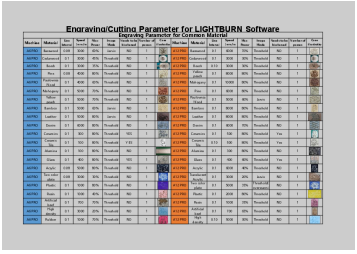

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Lenovo Instructions for Use IFU ATOMSTACK A24 PRO Laser Engraver 120W Unibody Cutter 24W Output Efficient Expandable Installation Free DIY Engraving Cutting Machine with Auto Air Assist Control Wood Metal Acrylic Craft Arts Crafts Sewing A1 fbGLFOtL m media amazon images I |||

Machine **A6 PRO** Material Basswood Engraving/Cutting Parameter for LIGHTBURN Software Engraving Parameter for Common Material Line Speed MaxInterval mm/m Power Image Mode Needs to be Number of Case blackened passes illustratio Machine Material Line Interval Speed mm/m MaxPower Image Mode N...

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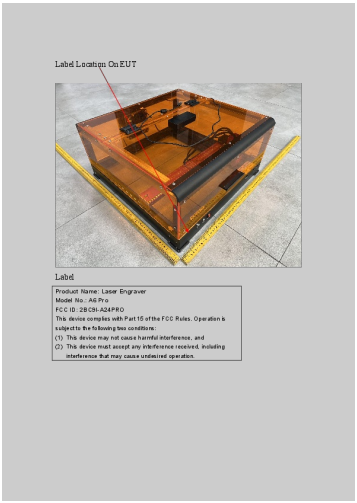

[pdf] Label

06 A24 pro LabelSmpl US Shenzhen AtomStack Technologies Co Ltd A24PRO Laser Engraver 2BC9I 2BC9IA24PRO a24pro

Label Location On EUT Label Product Name: Laser Engraver Model No.:**A6 Pro** FCC ID: 2BC9I-A24PRO This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 1 This device may not cause harmful interference, and 2 This device must accept any interferen...

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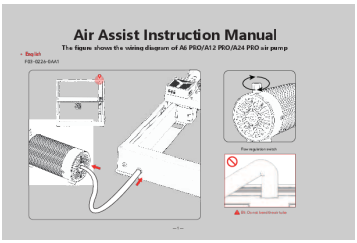

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