Dino-Lite AM4025X

Dino-Lite USB Eyepiece Camera AM4025X Instruction Manual

Model: AM4025X | Brand: Dino-Lite

1. PRODUCT OVERVIEW

The Dino-Lite AM4025X is a 1.3-megapixel USB eyepiece camera designed to convert traditional optical microscopes into digital imaging systems. It captures high-resolution images and videos, allowing for digital observation, documentation, and analysis. This device integrates seamlessly with various traditional microscopes by fitting into standard eyepiece slots.

Image 1.1: The Dino-Lite AM4025X USB Eyepiece Camera, highlighting its compatibility with traditional microscopes, Windows & Mac software, USB 2.0 connectivity, and measurement capabilities.

2. WHAT'S IN THE BOX

Upon unpacking your Dino-Lite AM4025X, please verify that all the following components are included:

- Dino-Lite AM4025X Eyepiece Camera with integrated USB cable
- Quick Start Guide and Software Download Link
- Carry Pouch for storage and transport
- Calibration Target for accurate measurements
- Various Adapters for different eyepiece diameters (23mm, 30mm, 30.5mm, C-mount)

Image 2.1: All components included in the Dino-Lite AM4025X package, including the eyepiece camera, cables, quick start guide, carry pouch, calibration target, and adapters.
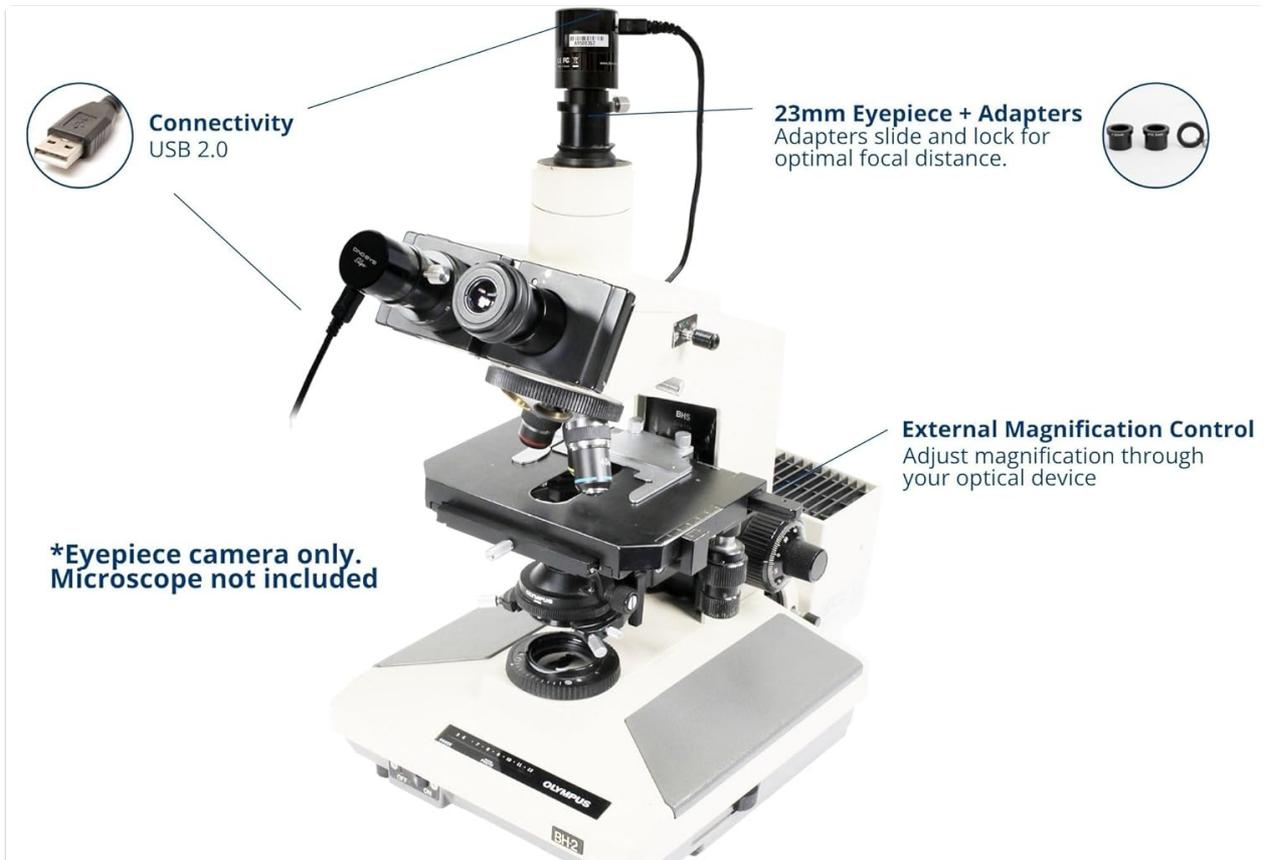
3. Setup Instructions

Follow these steps to set up your Dino-Lite AM4025X eyepiece camera with a traditional microscope:

1. **Prepare the Microscope:** Ensure your traditional microscope is stable and powered on. Remove one of the existing eyepieces from the microscope's ocular tube.

2. **Select the Correct Adapter:** Choose the appropriate adapter ring from the provided set that matches the diameter of your microscope's ocular tube (23mm, 30mm, 30.5mm, or C-mount).

3. **Install the Eyepiece Camera:** Gently insert the Dino-Lite AM4025X camera, with the selected adapter, into the microscope's ocular tube. Ensure it is seated firmly and securely.

4. **Connect to Computer:** Plug the USB cable from the AM4025X camera into an available USB port on your Windows or Mac computer.

Image 3.1: A hand demonstrating the installation of the Dino-Lite eyepiece camera into the ocular lens of a traditional microscope.

Image 3.2: The Dino-Lite AM4025X camera properly installed on a traditional microscope, showing the USB connection and adapter placement.

4. SOFTWARE INSTALLATION AND USE

The Dino-Lite AM4025X requires dedicated software for operation. The package includes a link to download the latest versions of DinoCapture for Windows and DinoXcope for Mac.

4.1. Software Installation

1. **Download Software:** Visit the provided software download link (usually found in the Quick Start Guide)

and download the appropriate software for your operating system (DinoCapture for Windows, DinoXcope for Mac).
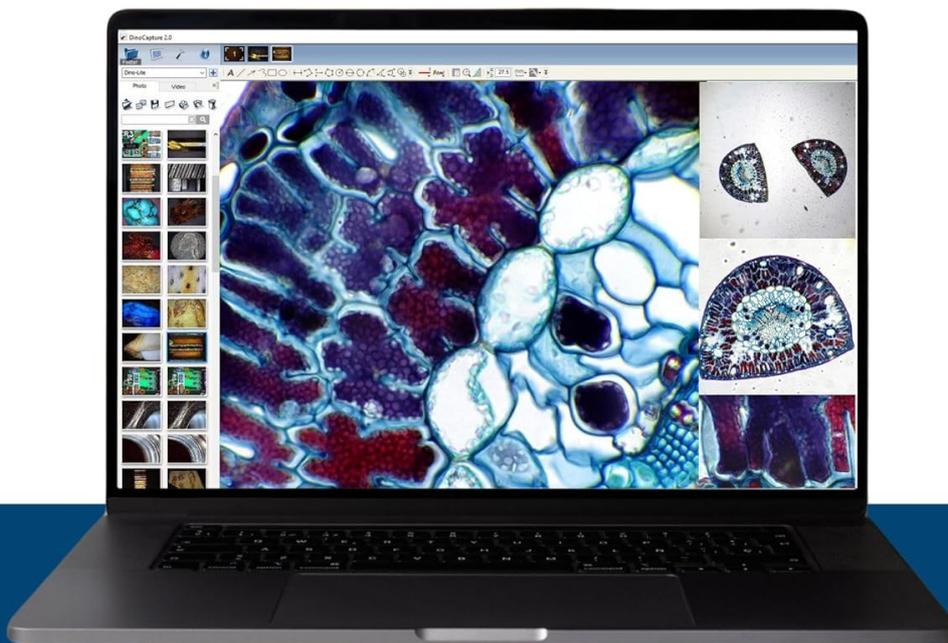
2. **Install Software:** Follow the on-screen instructions to install the software. You may need administrator privileges.

3. **Launch Software:** Once installed, launch the DinoCapture or DinoXcope application.

4.2. Basic Operation

With the camera connected and software launched, you should see a live image from your microscope on your computer screen.

- **Focusing:** Use the coarse and fine focus knobs on your traditional microscope to bring the specimen into sharp focus on the computer screen.
- **Magnification:** Adjust the magnification by changing the objective lenses on your traditional microscope. The AM4025X utilizes the optical magnification of the microscope.
- **Image/Video Capture:** The software provides tools to capture still images (1280 x 1024 resolution) and record videos (30 FPS). Refer to the software's help documentation for detailed instructions on these functions.
- **Measurement and Annotation:** DinoCapture and DinoXcope offer advanced features for annotating images and performing various measurements directly on the live feed or captured images.

Image 4.1: The DinoCapture software interface displayed on a laptop, showing live microscope feed and various tools for image capture, annotation, and analysis.

5. OPERATING GUIDELINES

To ensure optimal performance and longevity of your Dino-Lite AM4025X, observe the following guidelines:

- Always handle the camera and microscope with care to avoid damage to optical components.
- Ensure the USB connection is secure during operation to prevent interruptions.
- Use the microscope's built-in illumination for best image quality, as the AM4025X does not have an integrated light source.
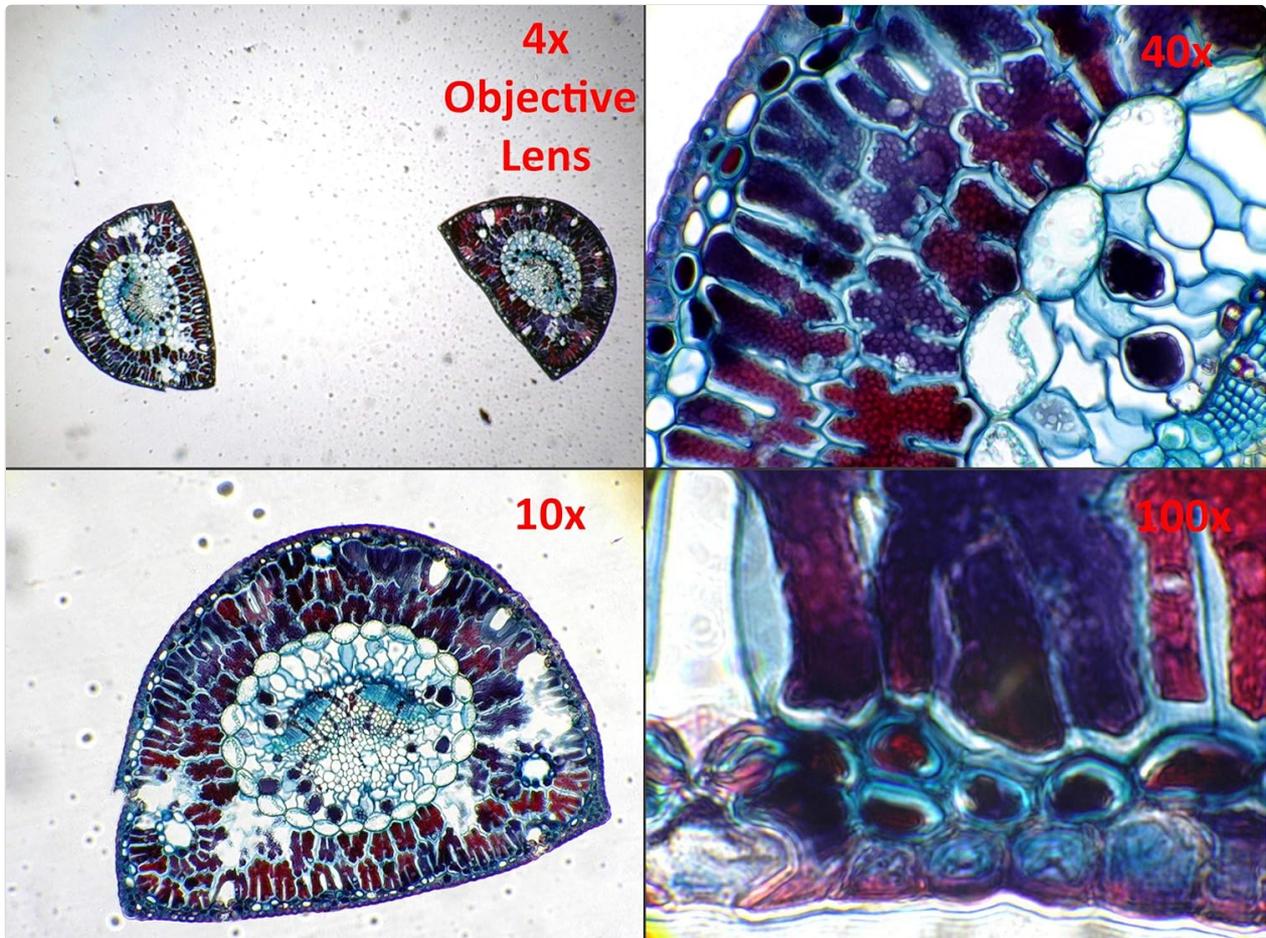- Avoid exposing the camera to extreme temperatures or humidity.

Image 5.1: Example digital images captured through the AM4025X, showing a pine needle cross-section at 4x, 10x, 40x, and 100x objective lens magnifications.

6. MAINTENANCE

Proper maintenance will help preserve the quality and functionality of your eyepiece camera.

- **Cleaning the Lens:** Use a soft, lint-free cloth specifically designed for optical lenses to gently wipe the camera's lens. For stubborn smudges, a small amount of lens cleaning solution can be applied to the cloth, not directly to the lens.
- **General Cleaning:** Wipe the exterior of the camera with a soft, dry cloth. Do not use harsh chemicals or abrasive cleaners.
- **Storage:** When not in use, store the camera in its carry pouch in a clean, dry, and dust-free environment. Avoid areas with extreme temperature fluctuations.
- **Cable Care:** Do not bend or crimp the USB cable excessively. Store it neatly to prevent damage.

7. TROUBLESHOOTING

If you encounter issues with your Dino-Lite AM4025X, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No image displayed in software	- Camera not properly connected - Software not recognizing camera - Incorrect camera selected in software	- Ensure USB cable is securely plugged into both camera and computer. - Try a different USB port. - Restart the software and/or computer. - Check device manager (Windows) or System Information (Mac) to see if the camera is detected. - In the software, verify that the AM4025X is selected as the active device.
Image is blurry or out of focus	- Microscope focus not adjusted - Specimen not properly prepared	- Use the coarse and fine focus knobs on your traditional microscope to adjust the focus. - Ensure the specimen slide is correctly placed on the microscope stage. - Adjust the microscope's objective lens.
Software crashes or freezes	- Outdated software/drivers - System resource issues	- Ensure you have the latest version of DinoCapture/DinoXcope installed. - Close other demanding applications. - Restart the software and computer.
Poor image quality (dark, grainy)	- Insufficient illumination - Camera settings	- Adjust the light source intensity on your traditional microscope. - Check the software's image settings (brightness, contrast, exposure) and adjust as needed. - Ensure the microscope's condenser and diaphragm are correctly set.

8. SPECIFICATIONS

Detailed technical specifications for the Dino-Lite AM4025X USB Eyepiece Camera:

Feature	Specification
Model Number	AM4025X
Image Resolution	1280 x 1024 (1.3 Megapixels)
Video Frame Rate	Up to 30 FPS
Connectivity	USB 2.0
Compatible Eyepiece Slots	23mm, 30mm, 30.5mm, C-mount

Feature	Specification
Compatible Operating Systems	Windows, Mac
Software Included	DinoCapture (Windows), DinoXcope (Mac)
Light Source Type	From Traditional Microscope (No integrated light)
Maximum Magnification	50x (dependent on microscope objective)
Product Dimensions	1.26 x 1.26 x 3.15 inches
Item Weight	13.7 ounces (0.39 Kilograms)
Material	Plastic
Color	Black
Voltage	5 Volts (USB powered)
Objective Lens Description	Achromatic

9. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation included with your product or visit the official Dino-Lite website. Dino-Lite provides customer support for technical assistance, software inquiries, and troubleshooting.

Online Resources:

- Official Dino-Lite Website: www.dino-lite.com
- Dino-Lite Store on Amazon: Dino-Lite Store

When contacting support, please have your product model (AM4025X) and any relevant purchase information ready.