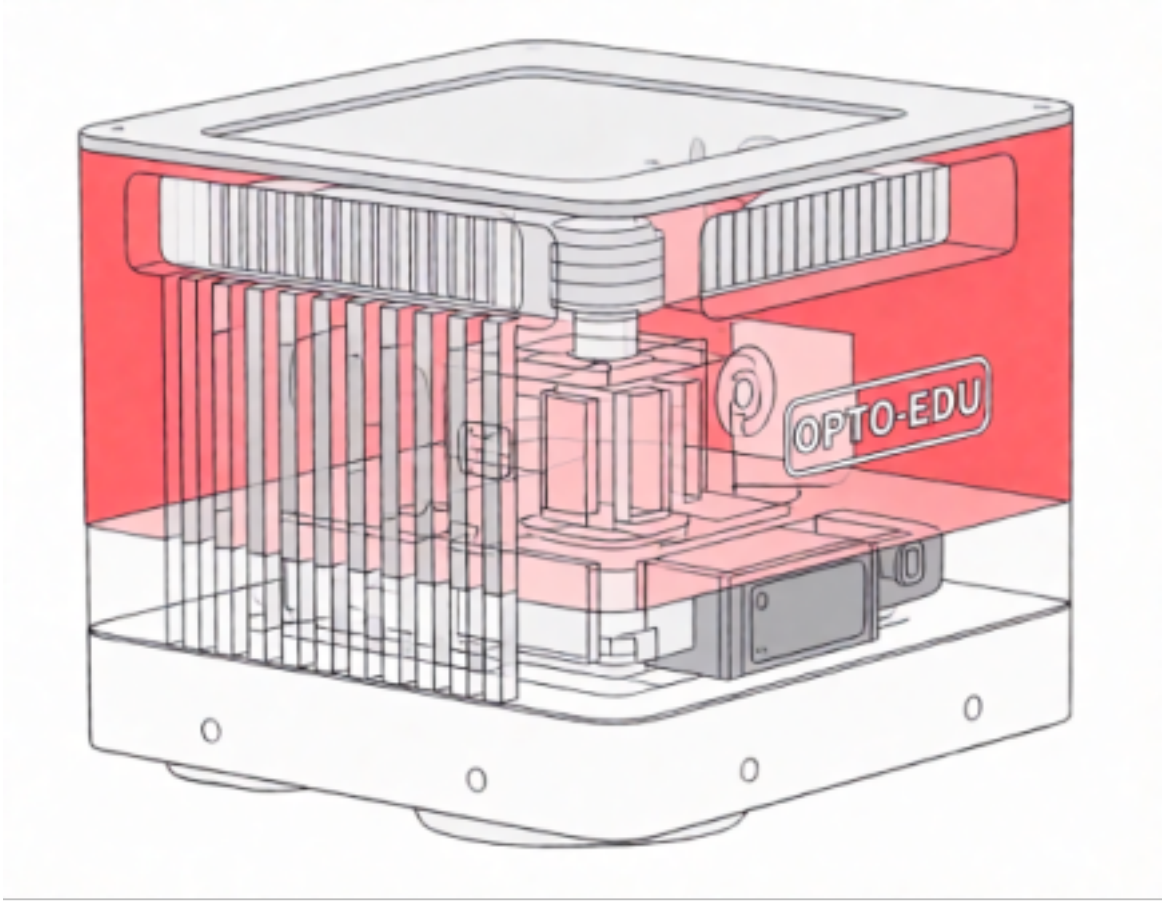
A59.4220 High-Performance Intelligent Microscopic Imaging Camera —— Redefining "Clarity" for Scientific Research and Industrial Inspection

In high-power microscopic observation, details determine success or failure. Traditional digital cameras are limited by field of view and depth of field, making it difficult to fully present the complete picture of complex samples. **Opto-Edu A59.4220** is not just a microscopic camera—it is an **integrated solution that combines intelligent systems, high-resolution imaging, and advanced image fusion technology** , specifically designed for scientific research, education, and industrial users aiming for the highest clarity and efficient workflows.

Built-incomputerand Window, ready to use upon startup

A59.4220 **comes with the built-in Windows 11 English operating system** , pre-installed with professional-grade **HCAMX measurement and imaging software** , eliminating the need to rely on laptops or desktops. Simply plug in the power supply, connect the microscope, and you can immediately start high-precision imaging, measurement, and analysis—truly achieving "Plug and Play, Efficient and Worry-Free".



4K Ultra HD picture quality, capturing every microscopic detail

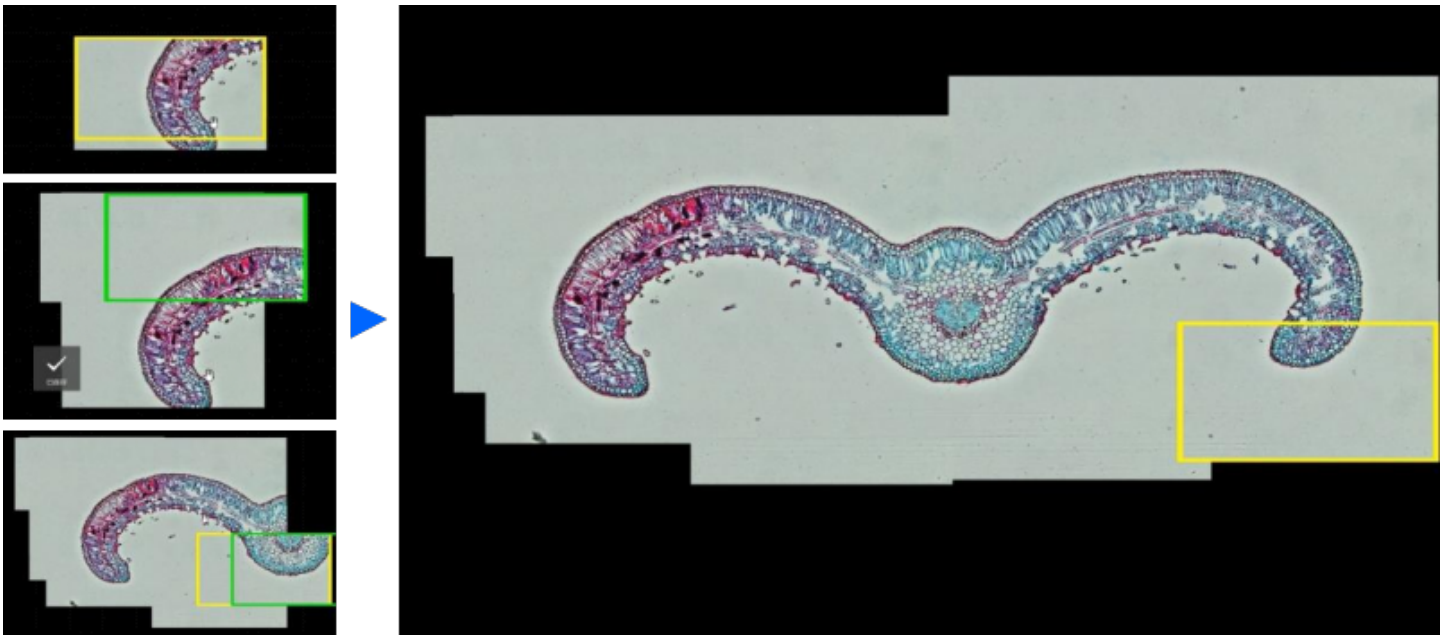
- **8 megapixel 4K resolution (3840×2160)**
- **1/1.8" large-size CMOS sensor**, high sensitivity, low noise
- **25fps real-time smooth imaging**, balancing clarity and speed

Whether it is cellular structure, microelectronic circuits, or material surface topography, A59.4220 can present sharp and true image details.

Intelligent image fusion technology breaks through optical limitations

? Real-time 2D planar stitching (Manual Stitching)

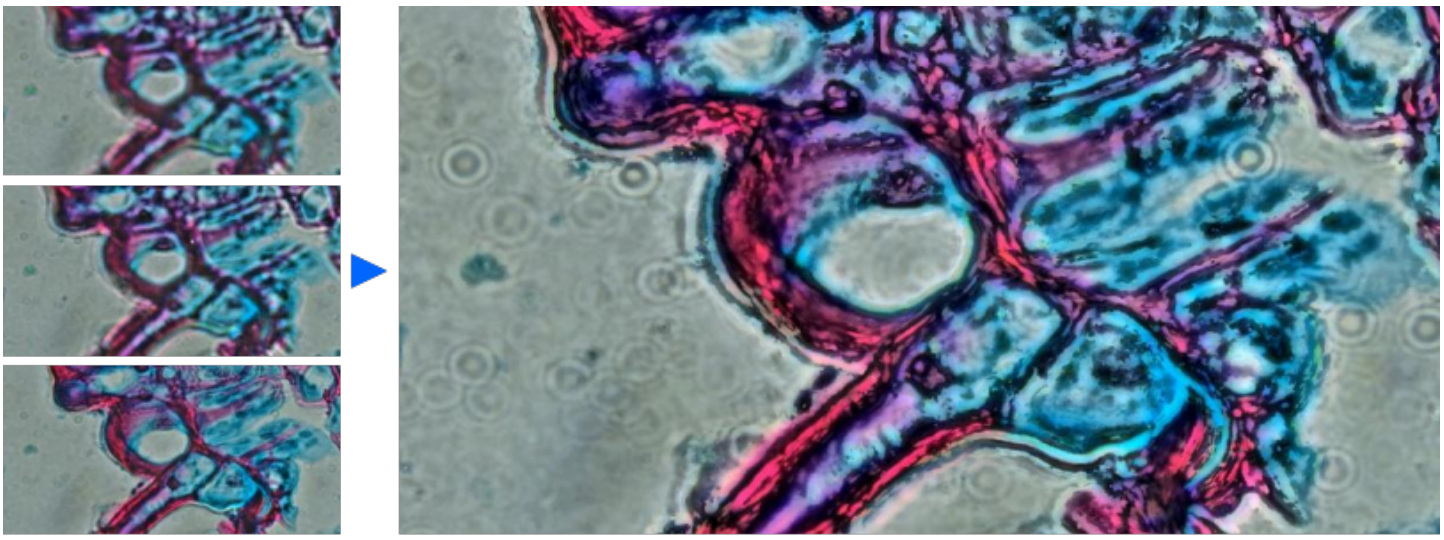
Limited field of view at high magnification? Simply**slowly move the stage in the X/Y direction**, and the HCAMX software will automatically scan and seamlessly stitch multiple images to generate**a panoramic image with an ultra-large field of view and high resolution**. It supports free zooming with the mouse wheel and one-click switching between macro and micro views.



? 3D Extended Depth of Field Fusion (Manual EDF – Extended Depth of Field)

When dealing with samples of a certain thickness (such as tissue sections, insects,

microdevices), traditional imaging can only focus on a single layer. A59.4220 supports **slow focusing along the Z-axis** , and the system automatically acquires multi-layer focus images and intelligently synthesizes them into **a single output image that is fully clear and fully focused** - enabling a clear view of the three-dimensional structure in one image.



EDF + 2D Stitching, a powerful combination, easily achieves **"large field of view + large depth of field"** high-quality imaging, meeting high-standard requirements such as paper publication, quality inspection reports, and teaching demonstrations.

All-in-one interface, flexibly adaptable to various scenarios

- **HDMI**: Directly connected to the monitor for real-time display

- **Dual USB 3.0 + USB Type-C** : High-speed data transfer and device connectivity

- **Gigabit Ethernet + 2.4G/5G Dual-Band Wi-Fi + Bluetooth** : Wireless Remote Control and Data Sharing

- **TF Card Slot**: Local fast storage, no need to rely on external devices

Whether in the laboratory, classroom, production line or in the field, A59.4220 can seamlessly integrate into your work environment.



Why choose A59.4220?

It is not only a camera, but also **an intelligent microscopic imaging workstation** .

It not only records images, but also **breaks through the limitations of optical**

physics, making complex samples "clearly visible" .

It does not rely on a computer, yet it is more powerful than being connected to one.

Opto-Edu A59.4220 —— Your Trusted High-Level Microscopic Imaging Partner.

Full Focus · Full Field of View · Full Intelligence

is now on the market. Experience the efficiency and freedom of next-generation microscopic imaging immediately!