OPTO EDU A64.1020 Full Auto APO BF Laser Confocal Microscope with High-Speed Resonant Scanning and Spectral Imaging

Basic Information

- Place of Origin: China
- Brand Name: OPTO-EDU
- Certification: CE, Rohs
- Model Number: A64.1020
- Minimum Order Quantity: 1 pc
- Price: FOB $1~1000, Depend on Order Quantity
- Packaging Details: Carton Packing, For Export Transportation
- Delivery Time: 5~20 Days
- Payment Terms: T/T,West Union,Paypal
- Supply Ability: 5000 pcs/ Month

Product Specification

- Eyepiece: WF10x/22mm Eyepiece, Diopter Adjustable +/-5°, High Eyepoint
- Head: 10-40° Tilt Adjustable Binocular Head
- Mag. Switch: Coded Manual Intermediate Magnification Switch Button 1x/1.5x On Right Side
- Objective: NIR Infinity Plan APO Achromatic Objective
- Focusing: Motorized Z Axis, Grating Type, Moving Range Up 8.5mm
- Transmit Light: Kohler Illumination, With Field/Iris Diaphragm, 0~25° Titl Adjustable Arm
- Highlight: **Full Auto Laser Confocal Microscope,
  APO Laser Confocal Microscope,
  BF Laser Confocal Microscope**

OPTO EDU A64.1020 NIR Laser Confocal Microscope Full Auto APO BF PH PL FL DIC Hoffman

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A64.1020

NIR Laser Confocal Microscope, Full Auto, APO,
BF+PH+PL+FL+DIC+Hoffman

**A64.1020 NIR Laser Confocal Microscope,
Full Auto, APO, BF+PH+PL+FL+DIC+Hoffman**

- 5 Channels 400~750nm Laser Confocal Microscope, 5 Laser Source & Standard PMT Detector

- Spectral Detector Wavelength 400~750nm 4 Channels PMT, Array Detector Ultra High Resolution 120nm

- Motorized Pin Hole Stepless Adjustment, Confocal View Field Square Inscribed In Dia.25mm Circle

- 5.7" Touch Screen, Infinity Plan Sem-APO Phase Contrast Objective 10x20x40x

- Motorized Nosepiece, Motorized XYZ, Motorized Condenser, Motorized Fluorescent Turret

The A64.1020 laser confocal microscope represents a significant advancement in biological research imaging technology. Designed for high-throughput, high-quality imaging, this system combines resonance scanning, array detection, and spectral imaging capabilities to meet the demanding requirements of modern life science research.

Key Features and Benefits
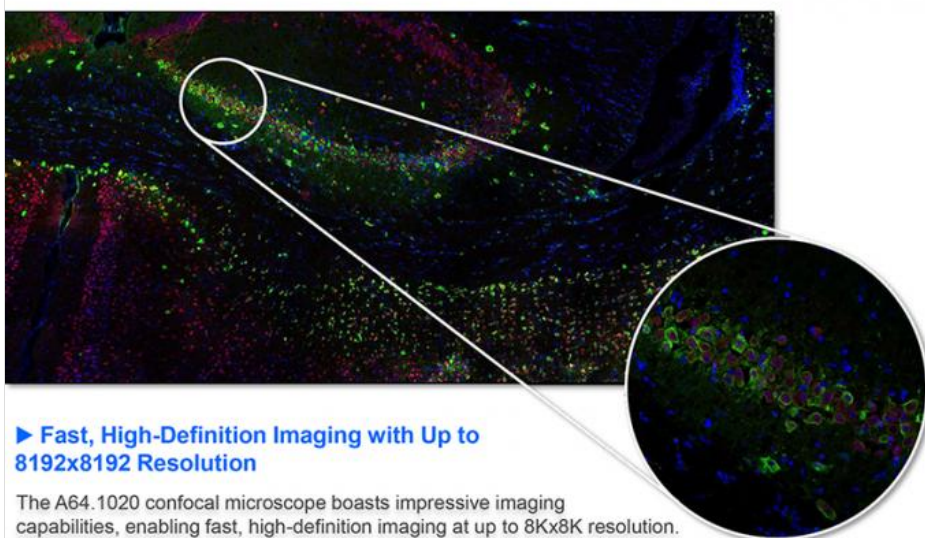
High-Speed Resonant Scanning

The A64.1020 utilizes resonant scanning technology, increasing scanning speeds by nearly 20 times while maintaining image quality. This reduces photobleaching and phototoxicity, enabling prolonged observation of sensitive live cell samples.

A64.1020 Get Better Data Quickly OPTO-EDU

Gentle Live Cell Imaging

Reduced pixel dwell time minimizes laser exposure, extending cell viability while enabling high-frequency data acquisition. Ideal for drug development research and microplate screening applications.


▶ Fast, High-Definition Imaging with Up to 8192x8192 Resolution

The A64.1020 confocal microscope boasts impressive imaging capabilities, enabling fast, high-definition imaging at up to 8Kx8K resolution. Through resonant scanning technology and a sophisticated optical system, it accurately captures every subtle structure of a sample. High-speed scanning ensures not only high-resolution imaging but also exceptionally detailed images, revealing even the smallest internal cellular structures and microscopic textures.

Low-Noise, High-Resolution Detection

The array detector accurately captures weak fluorescence signals, delivering clear, detailed images with precise resolution of sample microstructures.
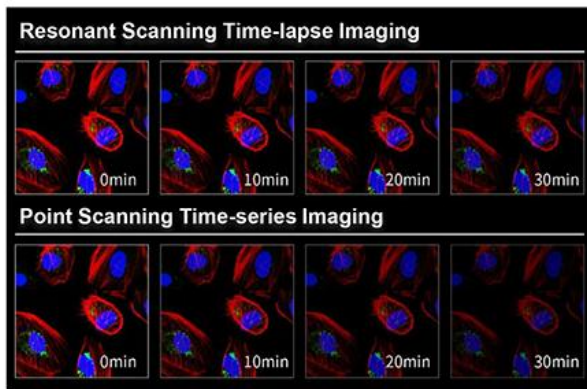
## High Sensitivity Spectral Imaging

GaAsP photomultiplier tubes improve fluorescence acquisition efficiency, enabling observation of weak fluorescent samples. The system supports four spectral ranges with ≤ 2nm resolution for superior multicolor imaging.
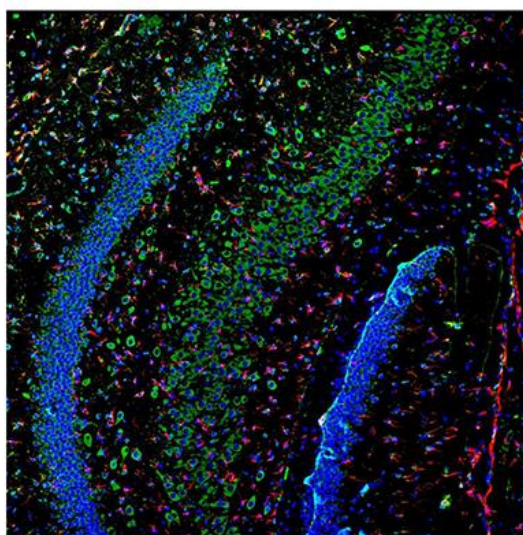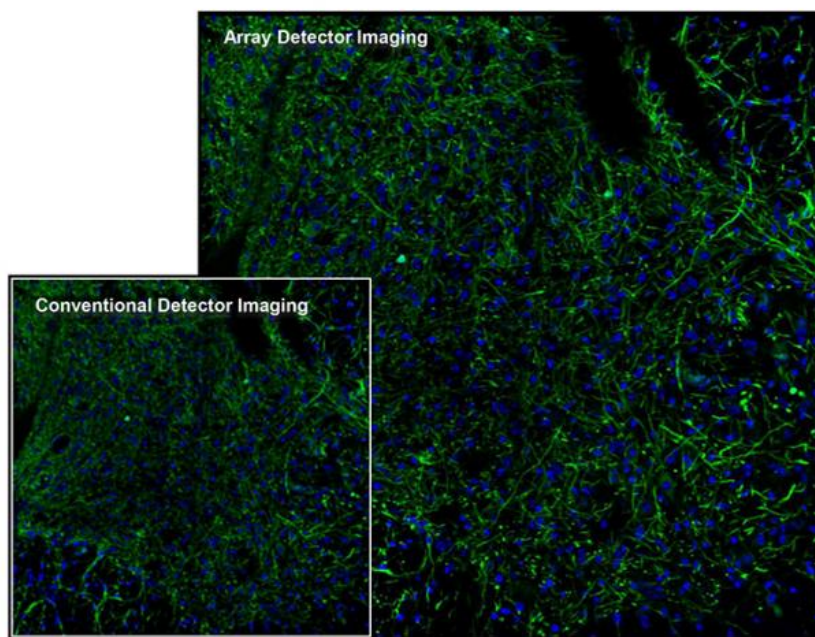
Advanced Imaging Technologies

Space Array Detection

The SPAD detector array collects two-dimensional spatial information at each scan point, revealing ultrafine structures lost in traditional confocal detection.
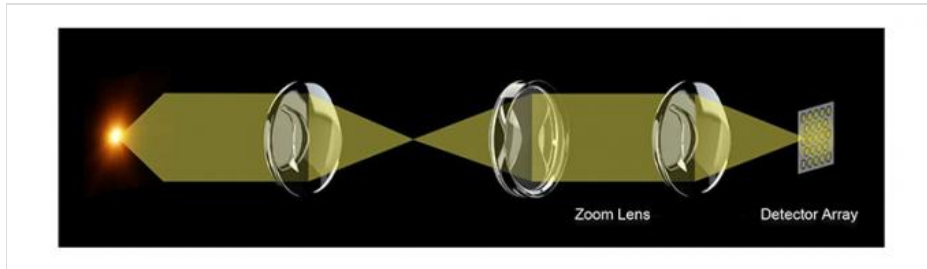

Spectral Unmixing System

Precisely distinguishes substances with similar fluorescence characteristics through spectral analysis, enabling qualitative sample analysis and biomolecule identification.

Adaptive Focus System (AFS)

The intelligent AFS eliminates focus drift, delivering consistently sharp images across all imaging modalities including super-resolution and confocal imaging.
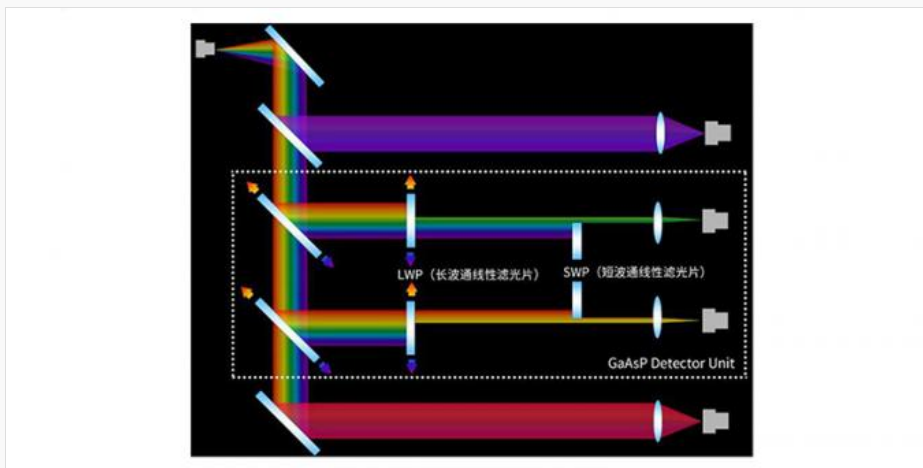
High-Performance Microscope Platform A64.1020 Research-Grade Inverted Microscope
The A64.1020 provides a powerful and flexible imaging solution, building a solid and highly scalable microscopy foundation for the A64.1020. High-speed motorized control enables easy operation, and the 25mm field of view provides ideal observation conditions for large-sample, high-throughput experiments.
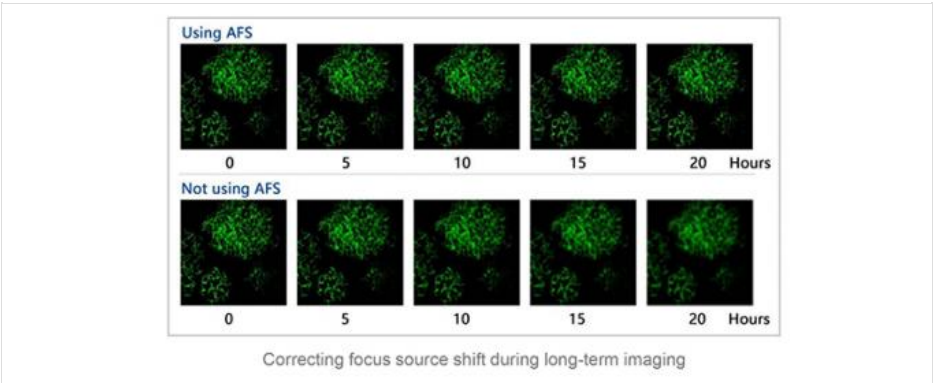

Precision Control and Operation

High-Speed Motorized Components

Rapid operation of objectives, filter cubes, XY stages, and observation modules creates an effortless workflow. The intuitive joystick control

makes operation as natural as manual microscopy.

Correcting focus source shift during long-term imaging

Multi-Dimensional Imaging

Supports combined X, Y, Z, λ, and T scanning with flexible modes including multi-channel fluorescence, time-lapse, Z-stacking, and panoramic stitching for diverse experimental needs.


Deconvolution Technology

Eliminates out-of-focus noise in confocal images through iterative deconvolution. 3D deconvolution enhances clarity and resolution across multiple axes for superior image quality.

Before Deconvolution   After Deconvolution
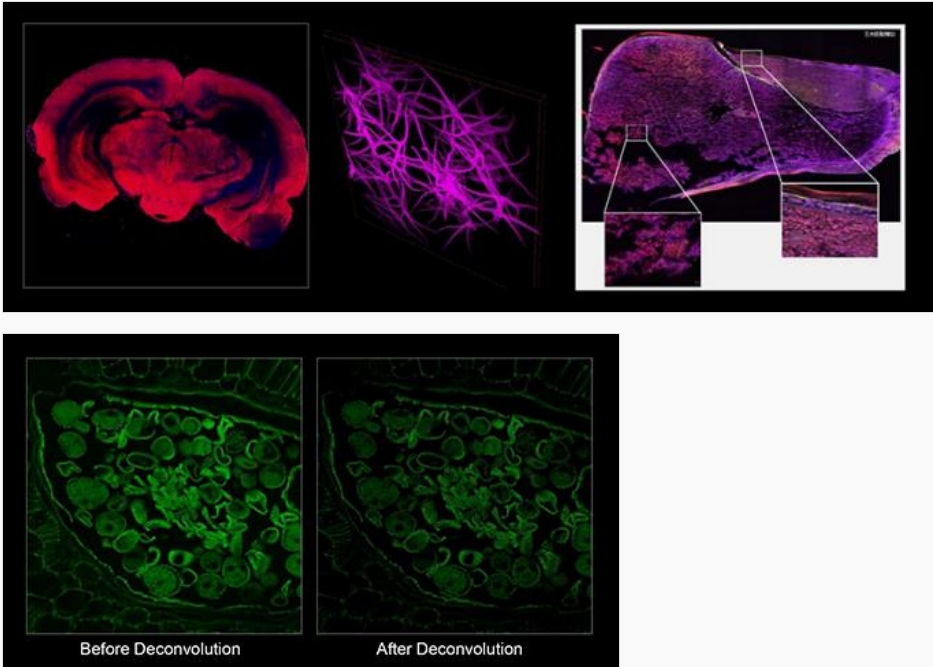
Technical Specifications

Component	Specification	Standard	Optional
Confocal System	5 Channels Laser Confocal 400~750nm	●	
Laser Source	4 Laser Source With AOTF, Max Power 50mW (405nm, 488nm, 561nm, 640nm)	●	
NIR Laser Source	730nm		o

Standard Detector	Wavelength 400-750nm, 5 Channels PMT (405nm, 488nm, 561nm, 640nm)	●	
Spectral Detector	4 Channels PMT, Spectral Range 400-750nm, Adjustable Accuracy 1nm	●	
Array Detector	Array-based Single-pixel Photon Counter; Resolution 120nm	●	
Scan Head	Max Pixel 8192x8192 (8K x 8K)	●	
Computer System	i7-11700/32GB DDR4/1TB SSD/RTX A2000 6G/Win 11	●	
Monitor	31" 4K Display	●	
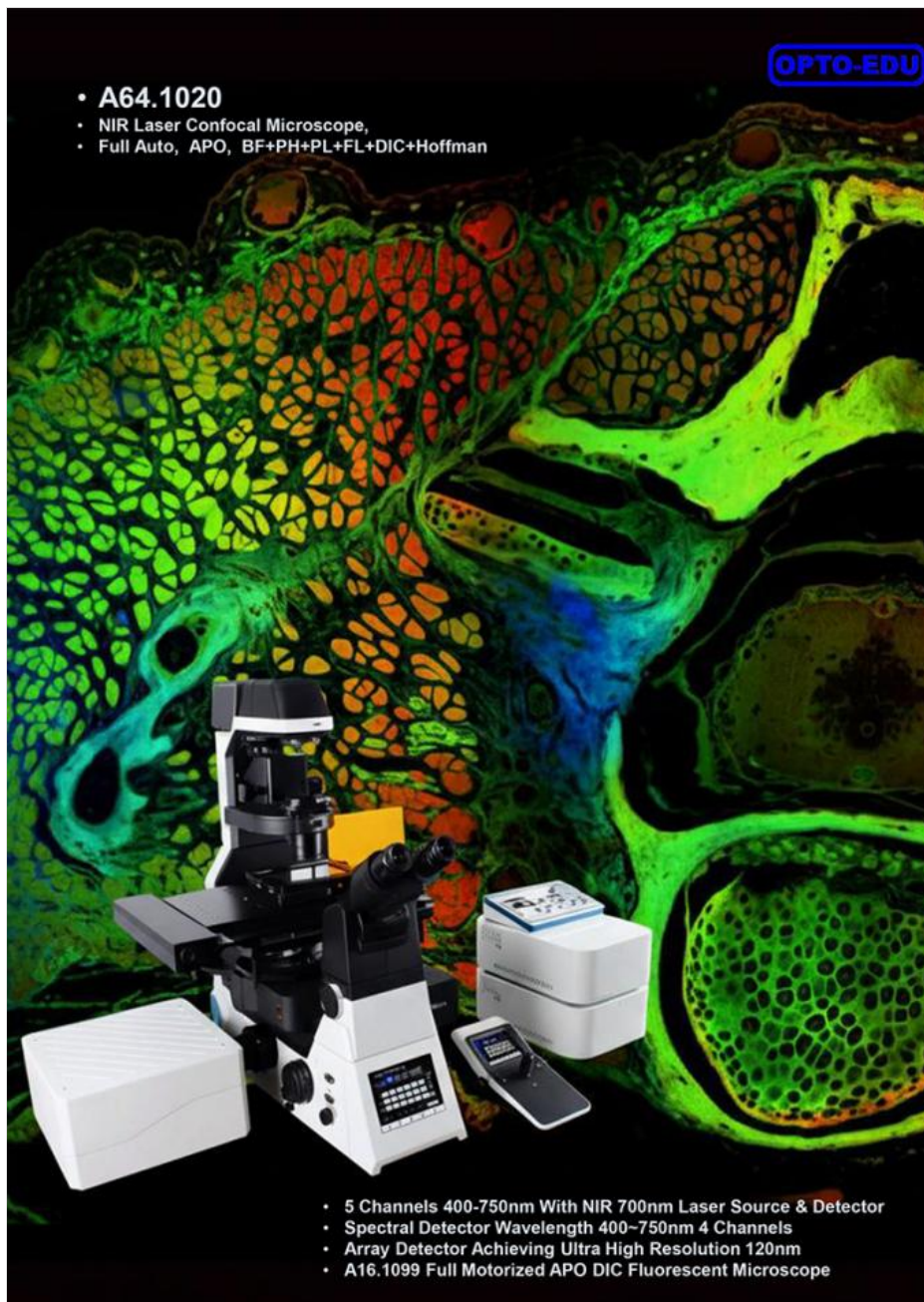
The A64.1020 offers exceptional expandability, supporting various accessories including live cell culture systems, super-resolution modules, and FRAP modules. This versatile system provides comprehensive solutions for cell biology, molecular biology, and biomedical research applications.