

Microscope Cameras

VLA-FDM-SC512 Microscope Cameras

Integrated professional-grade intelligent microscopic imaging system

- High definition and high speed, with precise details
- Intelligent control, upgraded efficiency
- Multi-mode adaptation, wide range of scenarios
- Convenient data, professional adaptation



One Platform Many Possibilities

Contact Us sales@venuslabtech.com

Get a Quote



Get Expert Advice
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Overview

High-Res Low-Noise Microscopic Imager —VLAFFDM-SC512 Microscope Camera :

The VenusLab VLAFFDM-SC512 series is a professional-grade electric continuous zoom autofocus digital microscope camera that integrates high-definition imaging, intelligent control, and multi-scenario adaptation. Equipped with a Sony IMX415 4K Starvis CMOS sensor, it supports 4K/60FPS low-latency output. The 1X-18X electric continuous zoom combined with autofocus function can accurately reproduce microscopic details, and it also has depth-of-field synthesis and image stitching capabilities.

The device supports HDMI/NETWORK/USB multi-interface connections, compatible with computers, monitors, mobile devices and other equipment. It has built-in XCamView software and voice control functions, integrating precise measurement, data storage and multi-image comparison tools, making operation convenient and efficient. It is suitable for multiple scenarios such as industrial inspection, scientific research experiments, teaching and training. A variety of lighting modules and brackets can be optional, which can not only meet the needs of on-site rapid inspection, but also adapt to laboratory fine analysis and automated system integration, providing an integrated microscopic imaging solution.

Product features of VLAFFDM-SC512 Microscope Camera:

- Optical imaging: 5 groups and 16 pieces of EMZO, 18x zoom; Sony 4K high signal-to-noise ratio CMOS.
- Zoom and focusing: electric continuous zoom + automatic/manual focusing, AF+EDF depth-of-field synthesis, parfocal.
- Output and storage: 4K multi-interface with low latency, SD/USB for storing RAW images, automatic network upload.
- Control functions: voice/mouse control, supporting stitching, comparison, measurement, and ISP optimization.
- Adaptation and expansion: 76mm bracket, optional LED ring light, compatible with multi-platform software.
- Field of view measurement: large field of view coverage, built-in 1-18x precise measurement calibration.

Dimension drawing of VLAFFDM-SC512 Microscope Camera:



Specifications

Specification of VLA-FDM-SC512	
White Balance	Auto White Balance
Color Technique	Ultra-Fine Color Engine
Capture/Control SDK	Windows/Linux/macOS/Android Multiple Platform SDK(Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc)
Recording System	Still Picture or Movie
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher
	Memory: 4GB or More
	Ethernet Port: RJ45 Ethernet Port
	Display: 19" or Larger
	CD-ROM
Operating Environment	
Operating Temperature(in Centidegree)	-10~50
Storage Temperature(in Centidegree)	-20~60
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Dimension	
Length x Width x Height	80mmx80mmx122mm
Shipping Weight	0.75kg

Packing List



Standard Packing List		
A	Gift box: L:220cm W:220cm H:110cm (1pcs, 2.0kg/box)	
B	VLAADM-SC512 Microscope Cameras	
C	Power Adapter: Input: AC100~240V 50Hz/60Hz, Output:DC 12V 3A	American Standard: Model: HKA03612030-7K : UL/CE/FCC(With American Standard AC Power Cable)European Standard: Model: HKA03612030-7K : UL/CE/FCC(With European Standard AC Power Cable)EMI Standard: FCC Part 15 Subpart BEMS Standard: EN61000-4-2,3,4,5,6
D	USB Mouse	
E	HDMI Cable	
F	USB3.0 A male to A male gold-plated connectors cable /1.5m	
G	CD (Driver & utilities software, Ø12cm)	
Optional Accessory		
H	Ethernet cable	
I	LED Ring Light(DRL1-5076a-NPC) or AALRL-200-7650(Not provided)	
J	USB flash drive	
K	USB WiFi adapter	
L	SD card(16G)	
M	USB voice control module	
N	Calibration kit	I06011/TS-M1(X=0.01mm/100Div,);
		I06012/TS-M2(X,Y=0.01mm/100Div,X,);
		I06013/TS-M7(X=0.01mm/100Div,X, 0.10mm/100Div,x)

Service & Support

We are dedicated to delivering exceptional optoelectronic solutions to every client. From precision manufacturing and secure delivery to full-lifecycle technical support, we are here to ensure a seamless and reliable experience at every step.

1. Warranty Policy

Quality First, Worry-Free Operation

Warranty Period: We offer a **two-year** warranty service for all of our core optoelectronic products, effective from the date of shipment.

Coverage: We provide free repair or replacement services for malfunctions caused by material defects or workmanship errors under normal operating conditions.

Rapid Response: Upon receiving a warranty claim, we guarantee to initiate the assessment process within **24 hours** to minimize your equipment downtime.

2. Technical Support

Expert Team, Full-Process Guidance

Technical Consultation: Our team of senior optical engineers provides **24/7 online support** to assist with installation, commissioning, optical path alignment, and parameter optimization.

Scheduled Maintenance: We offer full-lifecycle maintenance recommendations, including firmware upgrades, optical component cleaning guidelines, and precision calibration services.

Training Services: We provide customized remote or on-site operational and safety training to ensure your team can operate the equipment efficiently and safely.

3. Logistics & Delivery

Precision Packaging, Global Reach

Professional Packaging: Given the fragile nature of optical instruments, we utilize industrial-grade shockproof, anti-static, and moisture-proof vacuum packaging to ensure zero damage during transit.

Logistics Partners: We partner with top-tier global logistics providers (**DHL / FedEx / UPS / SF Express**) to offer reliable shipping with real-time tracking.

Shipping Insurance: All shipments are fully insured to eliminate logistics risks.

4. Compliance & Certification


Strict Standards, Total Compliance

Quality Certification: Our manufacturing process is **ISO 9001 certified**, and our products comply with international standards such as **CE** and **RoHS**.

Export Compliance: "Committed to environmental responsibility, all our products comply with **RoHS 2.0** and **REACH** standards, ensuring safety and global compliance."

Explore Series

Model	Working Distance Range	Optical Zoom Range
VL OptiScope 512S	205~255mm (Standard Working Distance: 250mm)	0.021X~0.39X (Normalized Magnification: 1X~18X)
VL OptiScope 512L	400~670mm (Standard Working Distance: 640mm)	0.0085X~0.1529X (Normalized Magnification: 1X~18X)

 Get in touch with our team to explore configurations, request a quote, or learn more about customized solutions tailored to your needs.

Let us help you move science forward—faster and smarter.

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Get Expert Advice
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