# VENUSLAB
## OPTOELECTRONICS

# Microscope Cameras
## VLAFDM-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

## Overview

**High-Res Low-Noise Microscopic Imager —VLAFDM-SC512 Microscope Camera**

The VenusLab VLAFDM-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 VLAFDM-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 VLAFDM-SC512 Microscope Camera:**

## Specifications

| Specification of VLAFDM-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 × Width × Height | 80mm×80mm×122mm |
| Shipping Weight | 0.75kg |

## Packing List

| Standard Packing List | |
|---|---|
| A | Gift box: L:220cm W:220cm H:110cm (1pcs, 2.0kg/box) |
| B | VLAFDM-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) |

## 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 moves cience forward—faster ands marter.