

iVideo-0325 FM 3D Video Microscope



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Features and Applications

The iVideo-0325 FM 3D Video Microscope is a precision optical inspection instrument integrated with 2D/3D observation functions. It adopts a combination of a large-field continuous zoom lens and a 4K ultra-high definition camera, supporting dual-interface output of HDMI and USB3.0. Equipped with core functions such as multi-mode measurement and image comparison, it is suitable for microscopic observation and precise measurement requirements in various fields including electronic manufacturing, precision machinery, and material testing, featuring convenient operation and stable performance.

Product Features

- Equipped with a 0.7-5.0X continuous zoom lens, supporting one-click switching between 2D/3D observation modes; 360° rotation for all-round inspection is available in 3D mode.
- Fitted with a 4K Ultra HD camera with a maximum resolution of 3840×2160, delivering clear and delicate images.
- Supports direct HDMI display connection and USB3.0 computer connection, compatible with mouse operation, and integrates multiple functions such as photographing, video recording and measurement in one device.
- Provides a rich set of measuring tools covering 18 measurement types including length, angle and area, with a measurement accuracy of 0.01μm to meet the needs of precision inspection.
- Supports custom setting of grid lines, can save 8 groups of preset schemes, and is equipped with image comparison and four-screen comparison functions for easy multi-sample analysis.
- Configured with a light source controller with adjustable brightness, suitable for the observation of samples of different materials and reducing reflection interference.
- The fuselage structure is stable with visualized operation procedures, easy for beginners to master.



Features and Applications

Product Application

- Suitable for microscopic structure observation and defect detection in the fields of electronic components, precision mechanical parts, PCB boards, new materials, etc.
- Meets the needs of real-time quality control in production sites and precision analysis in laboratories, and can be used in incoming material inspection, process monitoring, finished product acceptance and other links.
- Supports accurate product dimension measurement and data archiving, applicable to scientific research institutions, factory quality inspection, university experiments and other scenarios.
- Realizes comparative analysis of real-time images and stored images, facilitating consistency verification and abnormal troubleshooting in mass production.
- Adapts to samples of different materials such as metal, plastic and electronic components, and is compatible with the inspection requirements of planar and three-dimensional structures.



Instrument Appearance

Product Structure



1. HDMI 4K Camera

2. 0.4X CTV Adapter Tube

3. 0.7-5.0X Continuous Zoom Lens Barrel

4. LED Ring Light Source

5. 2D/3D Viewer

6. 320*260mm Base Plate

7. 32mm Round Column

8. Coarse Focus Adjustment

9. Light Source On/Off Control Button

10. Light Source Intensity Control Knob

11. 11.6-inch Screen

Product Details

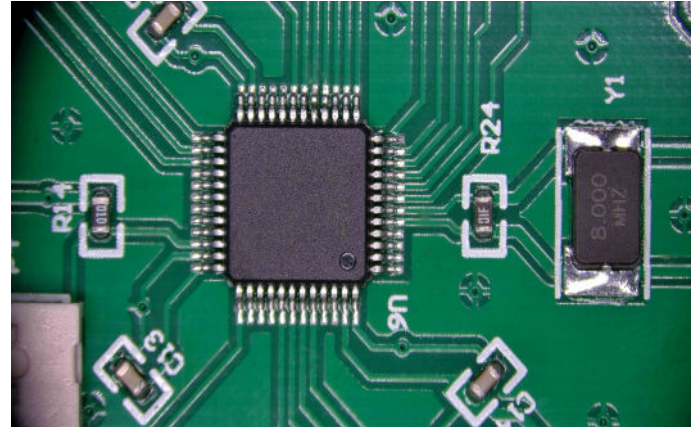
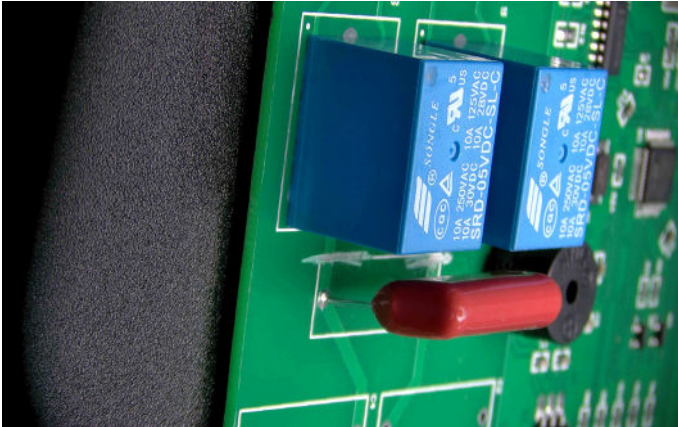
HDMI 4K Camera



- Ultra-high definition detail capture: 4K resolution combined with a 1/1.8-inch CMOS sensor, the pixel count is 4 times that of 1080P, which can accurately present microscopic defects at the 0.01mm level and provide a reliable basis for inspection.
- Plug-and-play for efficient operation: HDMI direct connection to the display requires no driver; with mouse control, real-time images can be output quickly after startup, enabling beginners to get started immediately and adapting to the real-time inspection needs of production lines.
- Dual-interface for scenario adaptation: HDMI focuses on on-site real-time observation, while USB3.0 connects to the computer for in-depth analysis, realizing cross-platform compatibility and meeting the needs of both quality inspection and laboratory analysis.
- Stable imaging in complex environments: Wide dynamic range technology balances bright and dark details; combined with four-zone light source, it reduces reflection and noise, suitable for the inspection of samples of various materials.
- Integrated full-process functions: Simultaneously supports 4K video recording, 18 types of measurement and image comparison; data can be directly archived and exported, realizing the integration of "observation-analysis-recording".

Product Details

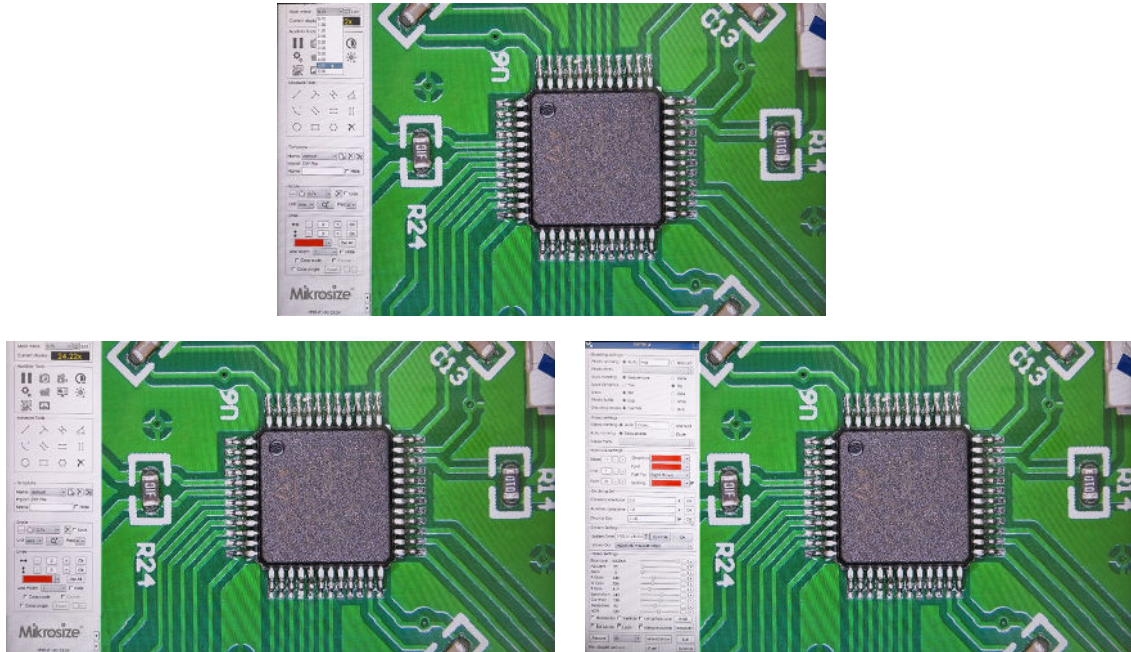
2D/3D Imaging



- Dual-mode precise adaptation: 2D is dedicated to planar measurement and surface defect detection, while 3D presents three-dimensional topography; manual pushing and pulling enable mode switching to adapt to inspection needs of different dimensions.
- 3D all-dimensional observation: 3D mode can reconstruct 3D models with 360° rotation, clearly showing details such as height differences and steps, breaking through the planar limitations of traditional microscopes.
- Zero-cost switching connection: The working distance and central position remain unchanged when switching between 2D and 3D, eliminating the need for refocusing and ensuring a coherent and efficient inspection process.
- Efficient and precise 2D inspection: Focuses on planar information processing; combined with 18 types of measuring tools, it quickly completes the accurate calculation of parameters such as dimensions and angles, suitable for batch screening.
- No blind spots in complex scenarios: 3D technology can distinguish overlapping and occluded parts, and 2D avoids reflection interference; the dual modes complement each other to cover the inspection of various materials and structures.
- Large depth of field for clear imaging: The optical system ensures a large depth of field in both modes, and can still take into account a wide range of details during high-magnification observation, reducing repeated focusing operations.

Product Details

Software Measurement


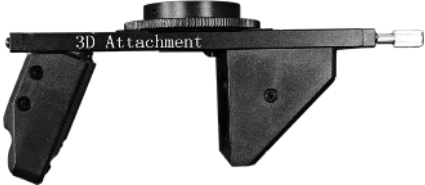




- Integrated full-process operation: Integrates observation, acquisition, measurement and analysis functions without the need to switch software; the whole process from real-time imaging to data archiving can be completed in one step, greatly simplifying the inspection process.
- Intelligent assisted precise measurement: Supports 18 types of geometric measurement, combined with automatic edge detection technology, with a measurement accuracy of 0.01 μm ; results can be directly exported to Excel to ensure data reliability.
- Intuitive and user-friendly interface design: Clear functional zoning, advanced settings hidden for beginners, support for direct mouse control, and guided procedures enable users to get started after simple training.
- Multi-mode image optimization: Built-in HDR, shadow correction and anti-glare functions; brightness and white balance can be adjusted with one click, adapting to complex imaging environments such as reflection and low light.
- Efficient data management and sharing: Supports automatic naming and storage of images, can save 8 groups of preset schemes, and data can be synchronized to network drives for convenient team collaboration and traceability.
- Flexible functional expansion and adaptation: Compatible with HDMI direct connection and computer-side operation, supports external storage devices, and can import standard images for four-screen comparison to meet diverse inspection needs.

Technical Specification

Optical System	0.7 - 5.0X continuous zoom lens, 0.4X CTV adapter tube
Observation Mode	2D planar observation, 3D stereoscopic observation (360° rotation)
Camera Parameters	4K Ultra HD, 1/1.8 CMOS, resolution 3840×2160
Focusing Method	Manual focusing
Measurement Accuracy	0.01μm
Measurement Functions	18 types of measurements including length, angle, area, radius, etc.
Interface Types	HDMI, USB 3.0, USB 2.0 (for mouse), DC - 12V
Light Source System	Separate LED adjustable light source
Display Support	Compatible with 24-inch and larger monitors, with the maximum display ratio of 456.2X.
Fuselage Size	Base plate: 320*260mm (The height of the column is suitable for the lens adjustment range)
Working Environment	Operating temperature: 20% - 80%; Storage temperature: 0°C-35°C
Power Supply	DC-12V power supply
Supported Languages	Simplified Chinese, Traditional Chinese, English



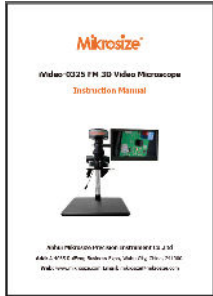

Standard Delivery

Name	Qty	Photo
Magnification Eyepiece Tube	1 pc	
2D/3D Converter	1 pc	
4K Camera	1 pc	
LED Light Source	1 pc	
LED Light Source Control Switch	1 pc	
LED Light Source Power Cord	1 pc	

Standard Delivery

Name	Qty	Photo
HDMI Cable	1pc	
Camera Power Cord	1 pc	
Ruler	1 pc	
USB 3.0 Cable	1 pc	
USB Flash Drive	1 pc	
11.6-inch Cscreen	1 pc	

Standard Delivery

Name	Qty	Photo
Screen Stand	1pc	
Screen Power Cord	1 pc	
Instruction Manual	1 copy	
Certificate Of Conformity	1 copy	
Warranty Card	1 copy	