

X5 Series

Standard and
3D Measurement version
Industrial Videoscope



Precision 3D Measurement
Designed for High-precision Inspection

PRODUCT INTRODUCTION

3D Measurement Industrial Videoscope

The product is equipped with an excellent imaging system, combined with high-performance image algorithms and AI technology, and features a high-precision 3D measurement system. It delivers clear, stable images and accurate, reliable measurements in various complex environments.



- ① Power Button
- ② DC Charging Port
- ③ HDMI Interface
- ④ USB 3.0 Interface
- ⑤ USB 3.0 Interface
- ⑥ Tube Strain Relief
- ⑦ Display Removal/Installation Button
- ⑧ Strap Slot
- ⑨ Type-C Interface
- ⑩ Headphone Jack
- ⑪ Articulation Joystick/
Function Switch
Button/Articulation Lock Switch
- ⑫ Status Indicator Light

- ⑬ Power Button/Menu / Back
- ⑭ Image Zoom - In Button
- ⑮ Image Zoom - Out Button
- ⑯ Freeze Button
- ⑰ Brightness Increase
- ⑱ Brightness Decrease
- ⑲ Photo/Video Button
- ⑳ Remaining Battery Indicator Light
- ㉑ Battery Level Display Button
- ㉒ Battery Indicator Light
- ㉓ Battery Compartment
- ㉔ Battery Removal/
Installation Button

TECHNICAL FEATURE

3D Measurement Industrial Videoscope



Equipped with High-Precision 3D Measurement System /01

• Smart 3D Measurement

Real-time acquisition of high-density point cloud data generates clear 3D point cloud maps, supporting precise defect detection and analysis.

• Multi-Dimensional Accurate Calculation

Capable of measuring point-to-point, point-to-line, point-to-plane, multi-segment, area, profile, missing corner, circle, gap, etc. Data is stable and reliable, meeting the demands of complex scenarios.

• AI Algorithms

Integrates high-performance image processing and AI technology to adapt to complex environments, ensuring imaging quality and measurement accuracy.



Direct-view
Measurement Lens



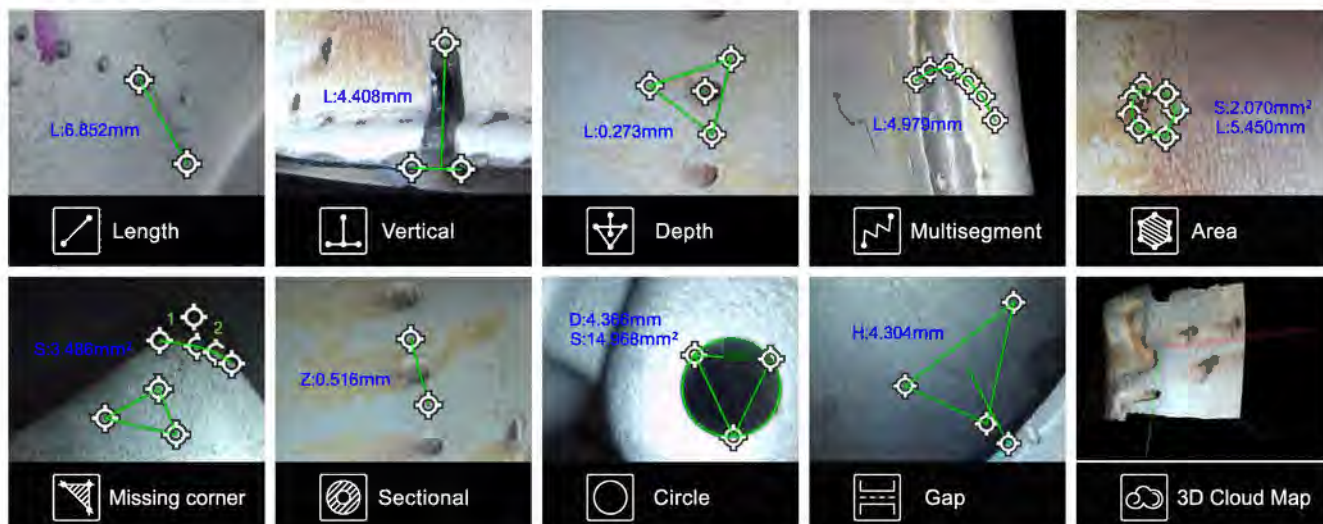
Side-view
Measurement Lens

0.01mm
Measurement
Accuracy

≤5%
Measurement
Error

3Dmold
Restore 3D
Model

3D Measurement Modes:





Tube Replacement Technology /02

- The main unit supports configuration with insertion tubes of various lengths, diameters, and light sources
- Patented certification for motor-controlled tube replacement.
- Enables quick disassembly and assembly of the insertion tube and host, significantly saving time and improving efficiency.



Patented certification for motor-controlled tube replacement



Ultra HD Lossless Image Quality /03

- Utilizes an ultra HD camera.
- Equipped with a 7-inch IPS full-lamination HD touch display.
- Built-in high-sensitivity image sensor.
- Features high-performance image algorithms.
- Delivers clearer, more detailed image quality, better presenting details and facilitating observation of various subtle defects inside equipment or components.



Blurred imaging during motion



X5 No motion blur



360° all-way articulation

Modular Flexible Design, Premium User Experience /04

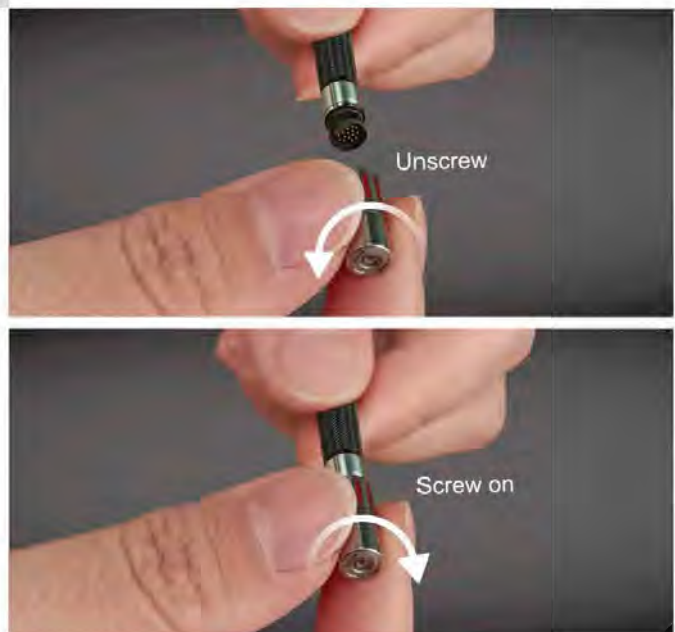
- 360° Motor-controlled articulating probe.
 - Handheld integrated ergonomic design.
 - Dual-power supply system for extended battery life.
 - Detachable touch display screen.
 - Unique dual-thread lens connection structure.
 - Large-capacity storage (built-in 16G, can expandable up to 128G).
 - Explosion-proof marking: Ex ib IIC T4 Gb.
- Certificate number: SYEx25.01163X.



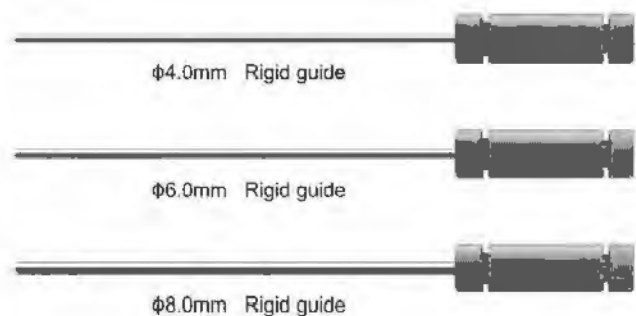


Interchangeable Lens and Tube Design /05

- Interchangeable tubes in various specifications from 0.95mm to 8mm.
- Interchangeable lenses: direct/side view, macro, near-focus, wide-angle, medium-focus, far-focus, etc.
- Standard white light illumination; optional infrared night vision, UV light, laser illumination, etc.
- Full range of interchangeable tubes; tubes in 4mm, 6mm and 8mm are available with interchangeable lenses.



φ0.95mm	L: 1-2m	DOF: 3-50mm	FOV: 120°
φ1.2mm	L: 1-2m	DOF: 5-50mm	FOV: 120°
φ1.6mm	L: 1-3m	DOF: 5-50mm	FOV: 120°
φ1.8mm	L: 1-3m	DOF: 5-50mm	FOV: 120°
φ2.0mm	L: 1-3m	DOF: 5-50mm	FOV: 120°
φ2.8mm	L: 1-3m	DOF: 5-50mm	FOV: 120°
φ3.0mm	L: 1-1.5m	DOF: 3-50mm	FOV: 130°
φ3.9mm	L: 1-3m	DOF: 3-100mm	FOV: 120°
φ4.8mm	L: 1-3m	DOF: 10-100mm	FOV: 100°
φ5.0mm	L: 1-10m	DOF: 8-80/10-100/15-130/15-∞(mm)	FOV: 100°/105°/120°
φ8.0mm	L: 1-10m	DOF: 8-80/10-100/15-130/15-∞(mm)	FOV: 100°/105°/120°



For detailed specifications and additional requirements, please consult our sales representatives.

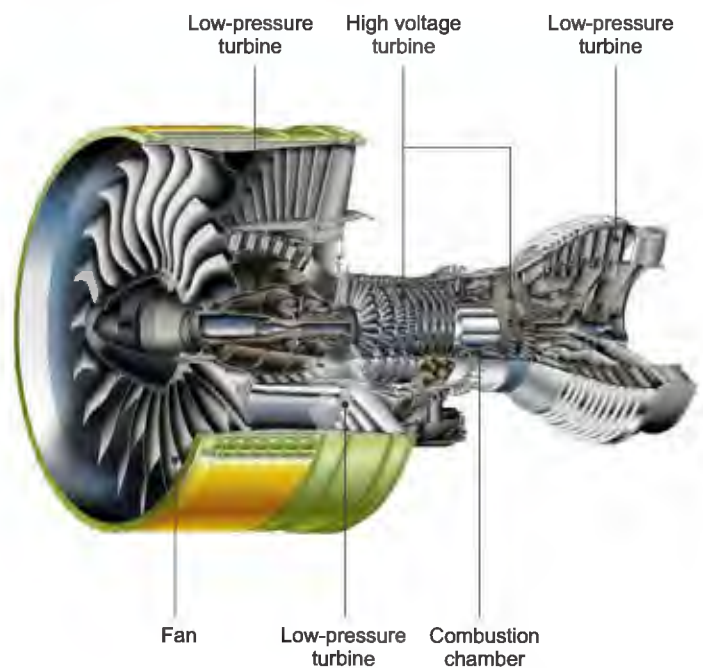
AVIATION INSPECTION

3D Measurement
Industrial Videoscope



Aerospace Hole Inspection Non-destructive Testing

Uses titanium alloy wear-resistant probes, million-pixel high-definition imaging and 120-degree wide-angle lens, capable of accurately detecting micron-level defects in key components such as engine blades and combustion chambers.



OPERATIONAL SCENARIOS

3D Measurement
Industrial Videoscope

Widely Applied :

Etrochemical:

Pipeline and tank inspection at refineries, reactor and heat exchanger inspection at chemical plants, maintenance of oil and gas transmission pipelines.

Pharmaceutical and food:

Explosion-proof workshop equipment inspection, alcohol tanks, fermentation tank inspection, raw drug reactor check.

Industrial Manufacturing:

Maintenance of painting and printing workshop equipment, safety inspection of solvent storage area, spot check of clean room in electronics factory.

Energy and Power:

Internal inspection of gas equipment, GIS equipment testing at substations, wear assessment of coal conveying pipelines.



SPECIFICATION PARAMETERS

3D Measurement
Industrial Videoscope

● Standard ○ Optional

Host System(Basic)	X5 (Standard Inspection Version)	X5 Pro (Flagship Measurement Version)
Display Specifications	New IPS Full-Laminated HD Touchscreen	
Display Size	7-inch	
Display Resolution	1920 * 1200	
User Interface	Menu selection via Touchscreen, Physical Buttons, and Joystick	
Host Storage Capacity	Default 16GB, Expandable to 128GB	
Host Standard	RAM 8GB	
Image Storage Format	JPEG / BMP	
Video Storage Format	MP4	
Real-time Image Zoom	1-5x (Supports Multi-touch Pinch-to-Zoom Gesture)	
Adjustable LED Brightness Levels	0-9 Level	
Image Quality	Adjust Image Brightness, Contrast, Hue, Saturation, Sharpness, Gamma & Restore Defaults	
Image Mode	Optional: Color, Black & White, Negative	
Ruler	Optional Modes: None, Circular Ruler, Crosshair Ruler, Reference Lines	
File Operations	Full-screen View / Zoom In-Out / Delete / Rename / Rotate / Doodle, etc.	
Image Zoom	1-5x zoom (Supports Multi-touch Pinch-to-Zoom Gesture)	
File Editing	Text Annotation, Doodle Function (Supports Hand-drawn Lines/Arrows/Squares/Circles,	
	Text Notes; Adjustable Pen Color/Thickness)	
User Permission Management	Admin, Guest, Standard User (Created by Admin)	
Language Support	Over ten languages including: Simplified Chinese, Traditional Chinese, English, Japanese, Korean, French, German, Portuguese, Spanish, Russian, Italian, Dutch, etc.	
3D Measurement System	/	Point-to-Point, Point-to-Line, Point-to-Plane, Multi-Segment, Area, Profile, Missing Corner, Circle, Gap Measurement
3D Display Modes	/	Right Image, Disparity Image, 3D Image, Point Cloud
Measurement Accuracy	/	0.01mm
Measurement Error	/	≤5%
Host Dust & Water Protection Rating	IP55	IP55

Host System(Optional)	X5 (Standard Inspection Version)	X5 Pro (Flagship Measurement Version)
Removable Display	●	●
Photo Function	●	●
Video Recording Function	●	●
Manual Display Brightness Adjustment	●	●
Image Rotation	●	●
Screen Freeze	●	●
Mirroring	●	●
Real-time Image Comparison	●	●
Timestamp	●	●
Virtual Joystick	●	●
Report Generation	●	●

Host System(Optional)	X5 (Standard Inspection Version)	X5 Pro (Flagship Measurement Version)
Battery Indicator on Handle	●	●
Remote Sharing of Images & Videos	●	●
Live Video Streaming	●	●

Power Supply Parameters	X5 (Standard Inspection Version)	X5 Pro (Flagship Measurement Version)
Power Input	220±10% V 50Hz	
Output	DC15V 6A	
Fast Charging	Charges for 5 minutes provides 30 minutes of use; Fully charges in 2h	
Host Battery Capacity (Non-removable)	Voltage: 7.4V, Capacity: 5000mAh	
Handle Battery Capacity (Removable)	Voltage: 7.2V, Capacity: 5000mAh	
Host Continuous Operating Time	≥4hours	

Output Ports	X5 (Standard Inspection Version)	X5 Pro (Flagship Measurement Version)
HDMI Video Output Port	1	
3.5mm Audio Output	○	
USB 3.0 Ports	2	
Type-C Port (Manufacturer-specific)	1	

Dimensions & Specifications	X5 (Standard Inspection Version)	X5 Pro (Flagship Measurement Version)
Host Dimensions	350mm × 197mm × 126mm	
Case Dimensions	551mm × 351mm × 240mm	
Host Weight (incl. batteries)	1.96kg	

Tube System(Basic)	X5 (Standard Inspection Version)	X5 Pro (Flagship Measurement Version)
* Probe Diameter (±0.1mm)	0.95 / 1.2 / 1.6 / 1.8 / 2.0 / 2.8 / 3.0 / 3.9 / 4.8 / 6.0 / 8.0	
* Tube Length Optional	1m~10m (Measurement function supports tubes of 2mm,4mm,6mm and 8mm)	
* Depth of Field (mm)	3-50 / 3-100 / 5-50 / 5-100 / 7-150 / 8-80 / 10-100 / 15-100 / 15-150/50-200	
* Field of View	80° / 100° / 120° / 140°	
* Camera Pixel	160K / 500K / 1MP / 2MP / 5MP	
Viewing Direction	Direct / Side / Dual-View	
Lighting Source	Front LED / Backeng LED with optical fiber / Laser	
Light Source Type	White Light / Infrared / UV Light	
* Probe Unidirectional Bend Angle	0°- 210°	
Probe Steering Speed	1-6Level	
Probe Material	Highly Wear-Resistant Titanium Alloy Probe	
Insertion Tube Material	Tungsten Alloy Wire Braided Tube	
Tube Dust & Water Protection Rating	IP68	

Tube System(Optional)	X5 (Standard Inspection Version)	X5 Pro (Flagship Measurement Version)
Interchangeable Tube	●	●
Interchangeable Lens	○	○
360° All-way Articulation	●	●
Probe Articulation	●	●
Probe Lock/Release Function	●	●

Operating Environment	X5 (Standard Inspection Version)	X5 Pro (Flagship Measurement Version)
Full Unit Operating Temperature	-20°C-60°C	

Operating Environment	X5 (Standard Inspection Version)	X5 Pro (Flagship Measurement Version)
Probe Operating Temperature	-25°C-100°C	
Storage Temperature	-40°C-60°C	
Relative Humidity	≤95% Non-condensing	

Standard Configuration	X5 (Standard Inspection Version)	X5 Pro (Flagship Measurement Version)
Dedicated Instrument Case	●	●
Complete Endoscope Unit	●	●
USB Drive	●	●
Power Adapter	●	●
Pipe Centering Tool	○	○
Handle Battery	●	●
Shoulder Strap	●	●
Battery Charger	●	●
HDMI Cable	●	●
Also includes: User Manual, Lint-Free Cloth, Usage Precautions.Rigid guide (optional).		

Personalized Customization	X5 (Standard Inspection Version)	X5 Pro (Flagship Measurement Version)
Customize Tube Length, Diameter, Lighting Method per Requirements	○	○
Optional Laser Illumination	○	○
Add Ruler Scale Markings to Tube	○	○
Software Customization	○	○
Lens Customization	○	○
★ For specific parameters (such as illumination, depth of field, pixel, field of view, working length, bending angle, etc.) and other requirements, please contact relevant personnel for confirmation.		

