X5 Series
3D Measurement Industrial Videoscope

COANTEC



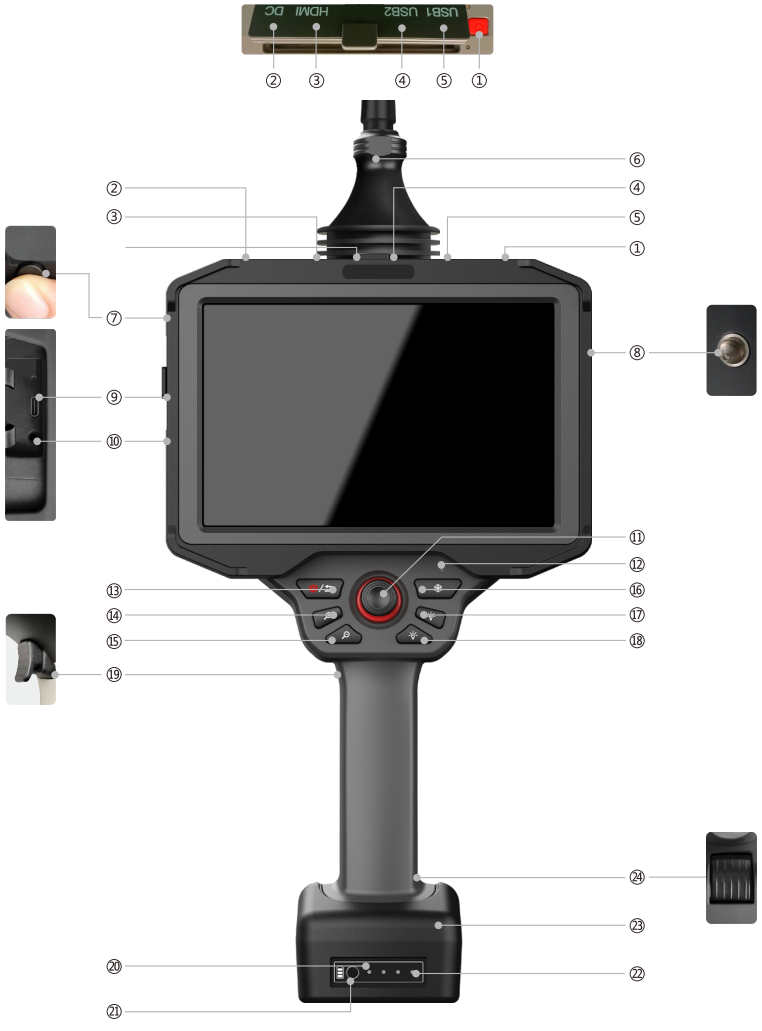
Precision 3D Measurement
Designed for High-precision Inspection

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

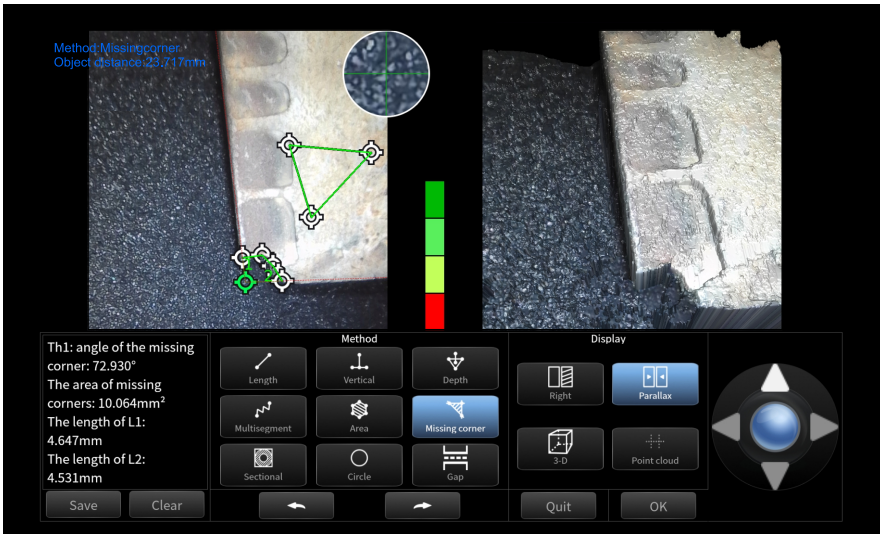
⑬ Power Button/Menu / Back
⑭ Image Zoom - In Button
⑮ Image Zoom - Out Button
⑯ Freeze Button

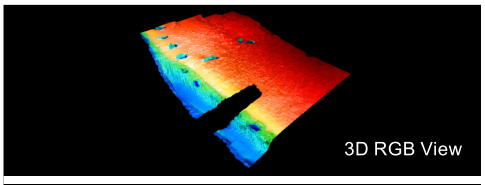
⑰ Brightness Increase
⑱ Brightness Decrease
⑲ Photo/Video Button
⑳ Remaining Battery Indicator Light
㉑ Battery Level Display Button

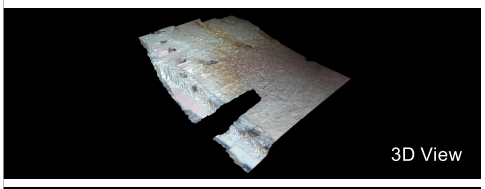
㉒ Battery Indicator Light
㉓ Battery Compartment
㉔ Battery Removal/
Installation Button

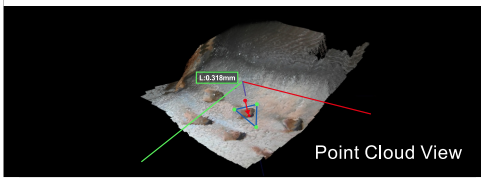
TECHNICAL FEATURE

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



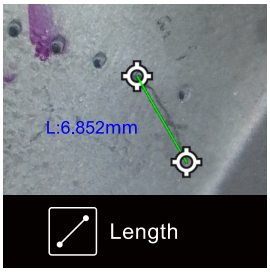
Side-view Measurement Lens

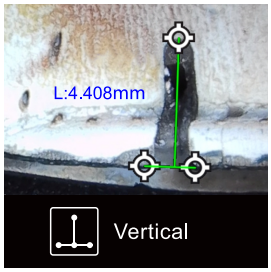
0.01mm Measurement Accuracy

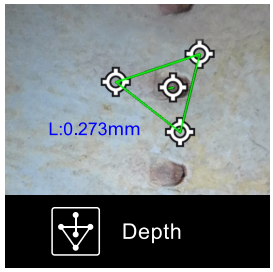
≤5% Measurement Error

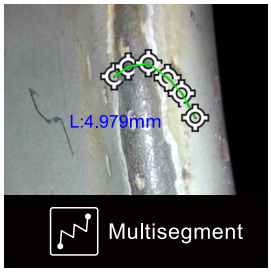
3Dmold Restore 3D Model

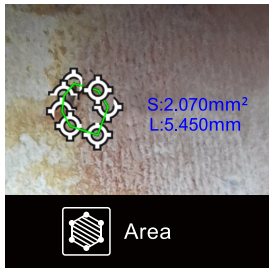
3D Measurement Modes:

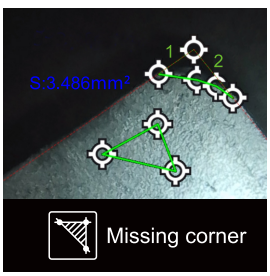


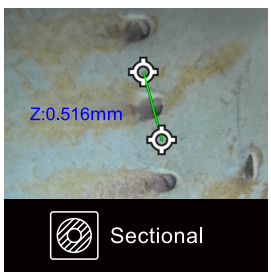


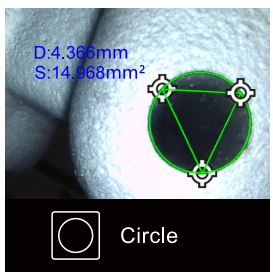


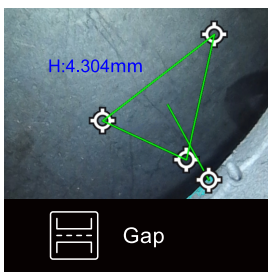


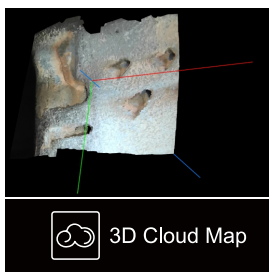
















Tube Replacement Technology /02

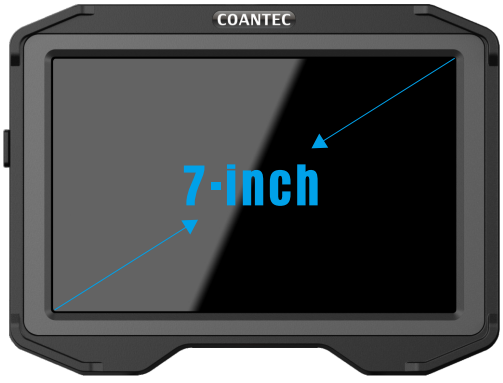
●The main unit supports configuration with insertion tubes of various lengths, diameters, and light sources

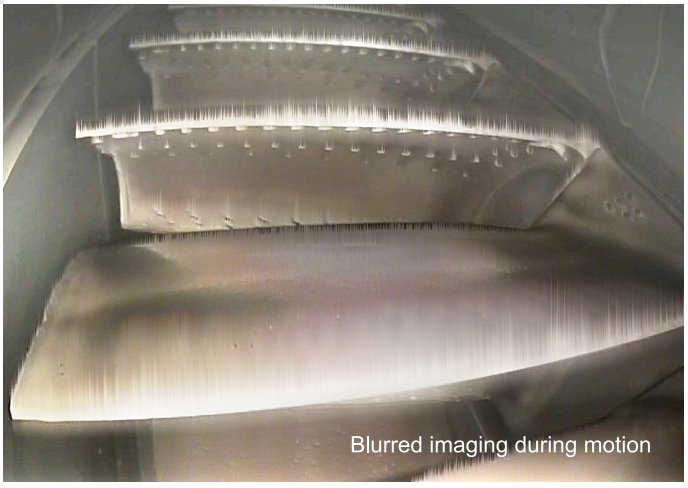
●Patented certification for motor-controlled tube replacement.

●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.







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.



High Wear-Resistant Titanium Alloy Probe

Dual Power Supply can be charged interchangeably

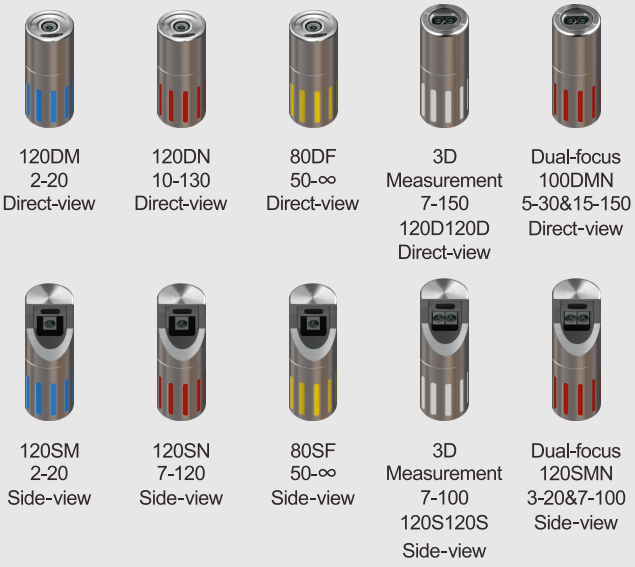




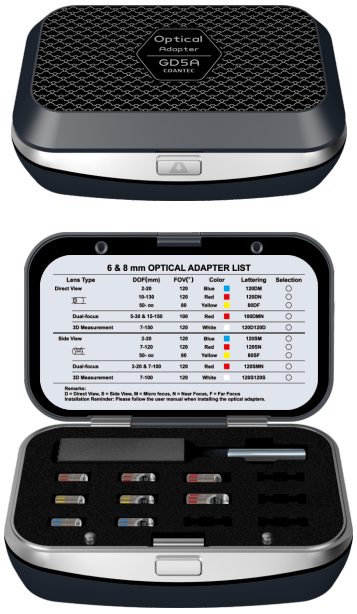
Battery charger







The unit for the depth of field of all lenses is (mm)



Interchangeable Lens and Tube Design /05

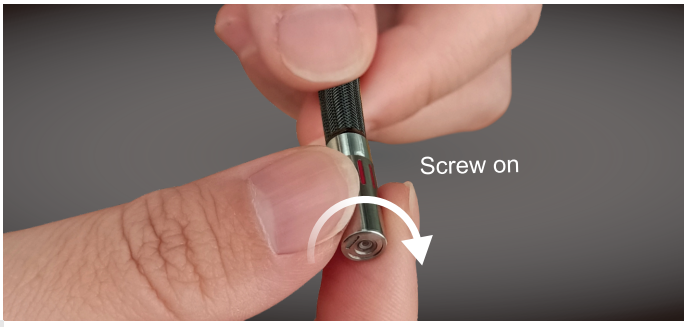
●Interchangeable tubes in various specifications from 0.95mm to 8mm.

●Interchangeable lenses: direct/side view, macro, near-focus, wide-angle, medium-focus, far-focus, etc.

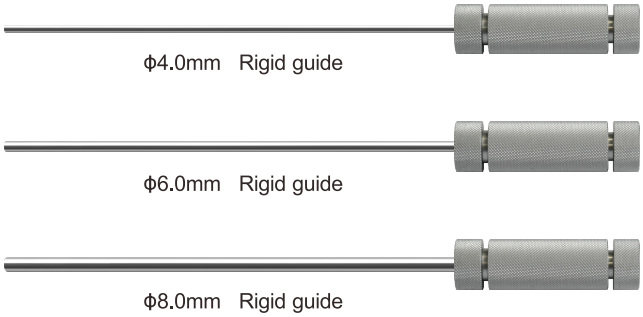
●Standard white light illumination; optional infrared night vision, UV light, laser illumination, etc.

●Full range of interchangeable tubes; tubes in 4mm,6mm and 8mm are available with interchangeable lenses.





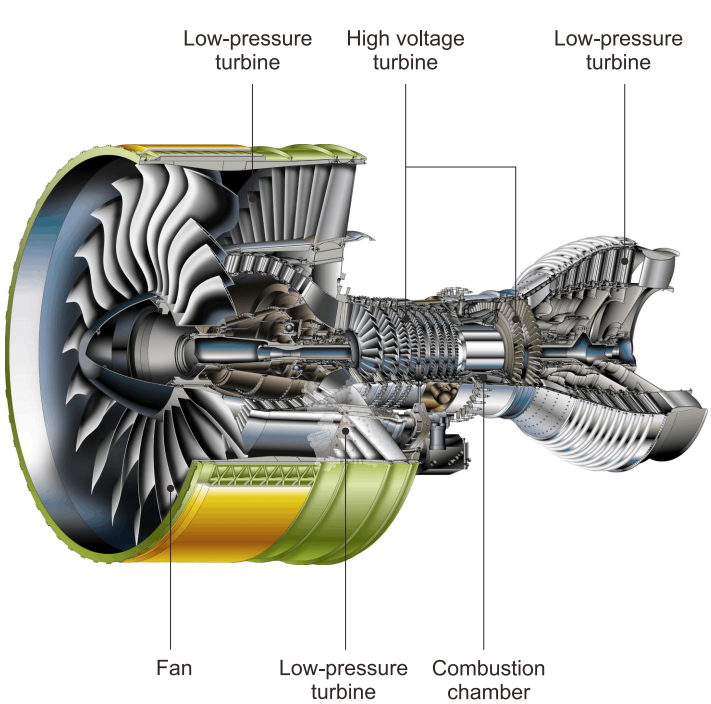




For detailed specifications and additional requirements, please consult our sales representatives.

AVIATION INSPECTION

3D Measurement
Industrial Videoscope



Aerospace Hole Inspection Non-destructiveTesting

Uses titanium alloy wear-resistant probes,million-pixel high-definition imaging and120-degree wide-angle lens, capable of accurately detecting micron-level defects inkey components such as engine blades andcombustion 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℃-60℃	

Operating Environment	X5 (Standard Inspection Version)	X5 Pro (Flagship Measurement Version)
Probe Operating Temperature	-25℃-100℃	
Storage Temperature	-40℃-60℃	
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.		

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