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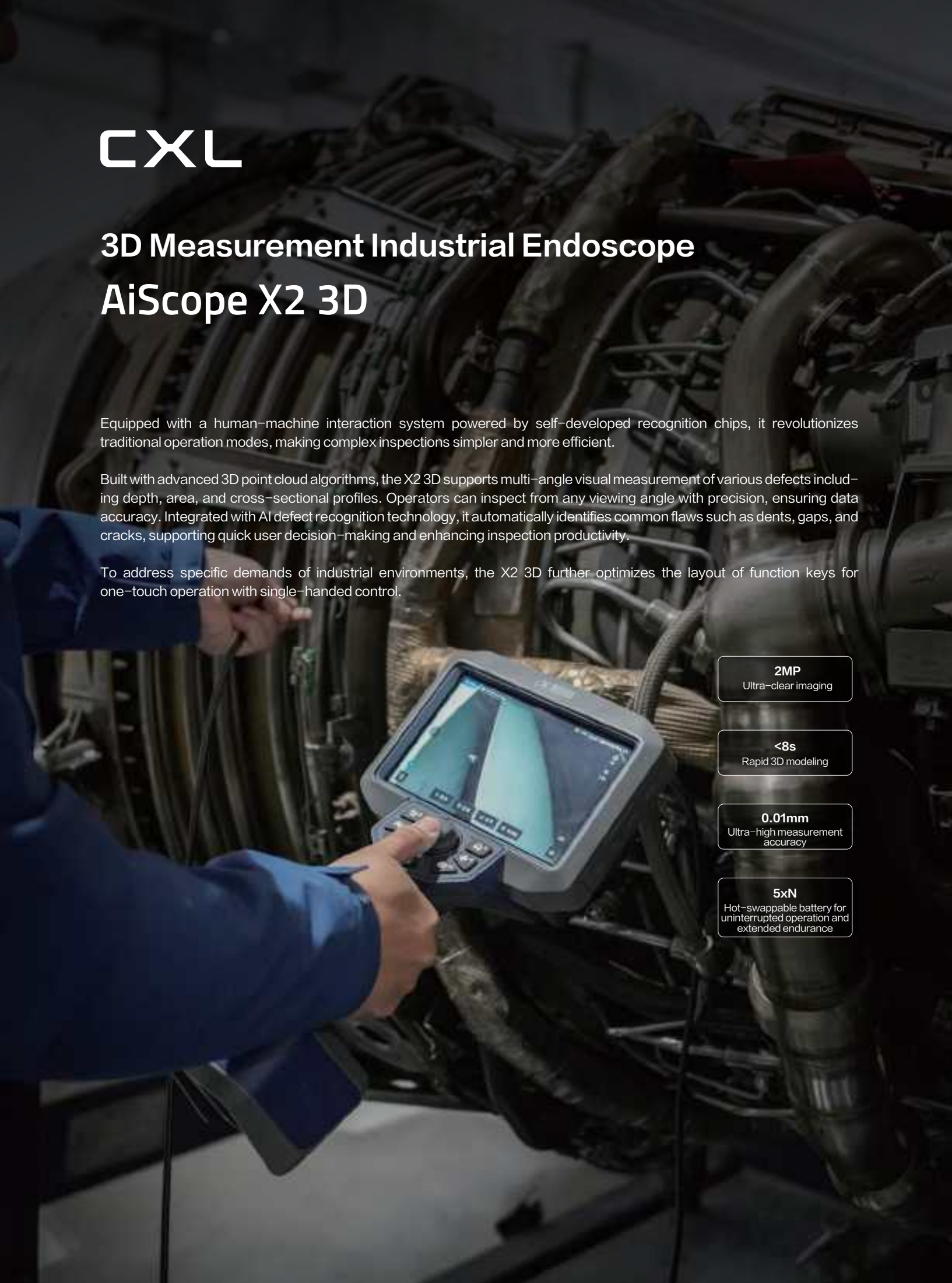
3D Measurement Industrial Endoscope

AiScope X2 3D

Equipped with a human-machine interaction system powered by self-developed recognition chips, it revolutionizes traditional operation modes, making complex inspections simpler and more efficient.

Built with advanced 3D point cloud algorithms, the X2 3D supports multi-angle visual measurement of various defects including depth, area, and cross-sectional profiles. Operators can inspect from any viewing angle with precision, ensuring data accuracy. Integrated with AI defect recognition technology, it automatically identifies common flaws such as dents, gaps, and cracks, supporting quick user decision-making and enhancing inspection productivity.

To address specific demands of industrial environments, the X2 3D further optimizes the layout of function keys for one-touch operation with single-handed control.



2MP
Ultra-clear imaging

<8s
Rapid 3D modeling

0.01mm
Ultra-high measurement accuracy

5xN
Hot-swappable battery for uninterrupted operation and extended endurance

Product Features

- Second-level, Complete 3D Modeling
- 13 Measurement Modes, Accuracy Up to 0.01mm, Error Less Than 5%
- 120° Wide Field of View, Paired with a 2-Megapixel Probe
- Intelligent Noise Reduction, Adaptive Fill Light, Clear in Low Light
- Supports Recognition of 9 Standard Defect Types and Private Model Training
- Automatic Cloud Upload of Inspection Data, Integrated Management for Remote Monitoring, Team Collaboration, and Quality Traceability

Measurement Modes

Point to Point

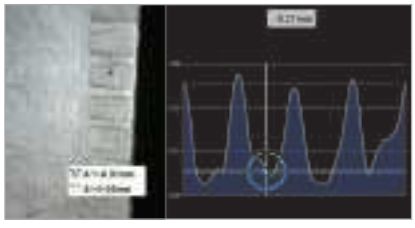
Point to Line

Point to Plane

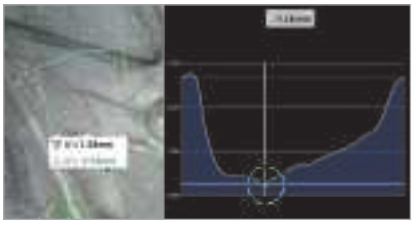
Pipe Diamete

Area

Polyline



Cross-Section



Regional Section

Virtual Plane

Application Workflows

Engine Turbine Blade Defect Identification

Steam Turbine Blade Inspection

Generator Stator Inspection

Engine Block Detection

Specifications	AiScope X2 3D
Main Unit System	
Main Unit Dimensions	369mm×189mm × 118mm
Chassis Size	600mm×390mm ×240mm
Display	7-inch Touch Screen，1920×1200px
Mini Joystick Control	Adjustable insertion tube light brightness and magnification, with menu control capabilities.
Memory	8GB + 128GB
Data I/O Ports	HDMI HD Interface, USB 3.0 Interface, USB 2.0 Interface, Type-C Interface, SIM Card Slot (Optional)
CPU Processor	Octa-core Processor, 2.4GHz Main Frequency
GPU Processor	Dedicated 3D Point Cloud Image Accelerator
NPU Processo	Dedicated Neural Network Processor, 6 TOPS Computing Power
Insertion Tube	
Insertion Tube Diameter	2.8mm, 4.0mm, 6.4mm, 8.4mm (Custom diameters require evaluation)
Insertion Tube Length	2.0m, 3.0m, 4.0m, 5.0m, 6.0m (8.0m and above require custom evaluation)
Lens Depth of Field	3mm-50mm, 8mm-150mm, 30mm to Infinity (Other focal lengths require custom evaluation)
Lens Field of View	80° ~120°
Illumination Brightness	Fiber Optic: 100,000 Lux+; LED: 40,000 Lux+
Image Sensor	1/7-inch Full Color Camera, 1/9-inch Full Color Camera, 1/18-inch Full Color Camera, 1/32-inch Full Color Camera
Image Resolution	160K, 520K, 1MP, 2MP
Guidance Control	Full 360° Omnidirectional Spherical Guidance, Max 180° Angle (Adjustable); Pure Electric Drive (Lock/Unlock Guidance with Two Fine-Tuning Modes: Locked Stepping and Locked Following)
Battery	
Standard Quantity	1
Lithium-ion Battery	64.8Wh，6400mAh
Battery Life	Battery Life: 5+ hours (at 15° C ambient temperature)
Hot-swappable (Power Continuity)	The main unit battery can operate independently for 20 minutes without any external power connection.
Software	
Operating System	Multi-Tasking Intelligent Operating System
User Interface	Multi-Touch Screen, Soft Buttons, Dedicated Joystick, and Voice Control
Dimming Control	100-Level Manual/Auto Dimming
Digital Zoom	Continuous 5x Digital Zoom
Image Control	Image Adjustments: Brightness, Exposure, Contrast, Sharpness, Color Saturation, Gamma, White Balance, Negative, Rotation (90°, 180°, 270°), Mirror, Default Reset
Image Format	JPG、PNG、BMP
Video Format	AVI、MP4
Language Support	Chinese, English, etc.
3D Measurement	
Measurement Support	3D High-Precision Measurement
Number of Measurement Modes	13 Modes
Measurement Modes	Length, Point-to-Line, Depth, Area, Polyline, Cross-Section, Regional Section, Virtual Plane, Plane Angle, Missing Angle, Radius Gauge, R-Angle, Line Angle
Measurement Accuracy	Error within 10% at 0° C to 60° C
Measurement Precision	Minimum 0.01mm
Working Distance Display	5-point real-time object distance display with measurement area assist frame
Export File Formats	PLY point cloud files (reusable for secondary analysis)
Advanced AI Features	
AI Defect Recognition & Blade Counting	Support
Defect Classification	Capable of identifying dents, notches, cracks, tears, ablation, burn-through, deformation, material loss, and other defect types.
Blade Counting	Supports automatic recognition of forward rotation, reverse rotation, pause, and reset to zero.
Accessories	Carrying case, cable reel, 32GB USB drive, rigid sleeve, cleaning kit.

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Scan for details

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