



AIT K Series

HD Videoscope with Motor-Driven Articulation



All the features that matter—nothing else.

Key Features and Benefits



Superior Visual Performance

- **True-HD screen (5.7", 1920 × 1080)** shows hairline cracks in full color.
- **Up to 2 MP sensor** enables visual inspection in HD video with zero-lag experience.
- **Interchangeable probes** from 1 mm to 8 mm and up to 30 m (100 ft).
- **Five-step LED lighting** enables perfect visibility in both dark and bright spaces.

Advanced Operational Features

- **Motor-driven joystick** allows you to set speed, lock, or reset with one touch.
- **360° All-Way articulation** and 210° bending angle let you look behind any obstacle.
- **Proprietary probe technology** keeps the picture signal clean even at full 30 m length.
- **Automatic defect ID** software highlights defects that could have been missed.
- **Multiple measurement modes** for sizing and reporting the defects.

Premium Durability & Convenience

- **Titanium alloy shell**—light in hand, tough in the field.
- **Hot-swap batteries (≈ 4 h each)** keep you running all shift.
- **High temperature sensor** shuts the system off to prevent damage.
- **Quickly generate inspection reports** using built-in inspection reporting software.



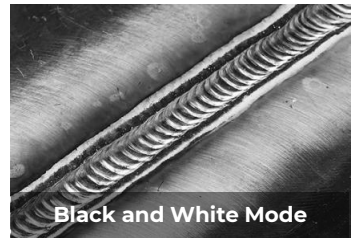
Crystal Clear Image



Automatic Defect ID



Negative Film Mode



Black and White Mode



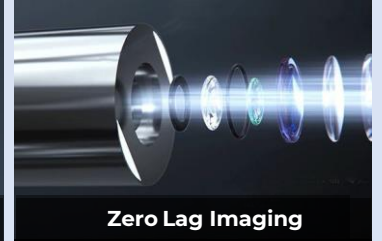
360° Flexible Articulation



210° Bending Angle



Adjust Articulation Speed



Zero Lag Imaging

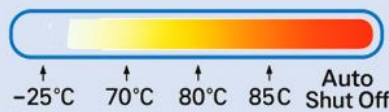
Multiple Measurement Modes

Pick the measurement style that fits the task. Standard Measurement gives you exact length, depth, and area. For fast “bigger-than / smaller-than” checks, tap Comparative Mode, align the on-screen ruler with a known feature, and the software scales everything for you.



High Temperature Warning

The screen shows probe temperature in real time. At 70 °C (158 °F) the number turns yellow, at 80 °C (176 °F) it flashes red, and at 85 °C (185 °F) the scope sounds an alarm and shuts the camera to prevent damage.





Advanced Reporting

After the inspection, tag each image with arrows and notes, then let the built-in software turn your findings into a polished report in seconds.

Inspection Report

Organization	Item Inspected
Location	ID Number
Inspector	Part Number

Inspection Results:

Inspection Point	Condition Description
 Inspection Point	 Inspection Point

One system, many probes—ready for any inspection

The AIT K-Series modular design splits into three quick-change modules: handset, probe, and battery so you re-configure in seconds. Swap probes on the fly, tackle any diameter, bend, or reach, and carry it all in one lightweight kit.

Probe options include 1.0 mm to 8.0 mm diameter, front view, side view, or dual view, in lengths up to 30 m with two-way or full 360° articulation.



1.0mm front view



1.8mm front view, one-way/two-way articulation



2.2mm front view/side view, two-way/360° articulation



2.8mm front view/side view, 360° articulation



3.8mm front view/side view, 360° articulation



3.8mm front view&side view dual-camera, 360° articulation



6.0mm front view, 360° articulation



6.0mm side view, 360° articulation



6.0mm front view&side view dual-camera, 360° articulation



8.0mm front view/side view/front view&side view dual-camera, 360° articulation



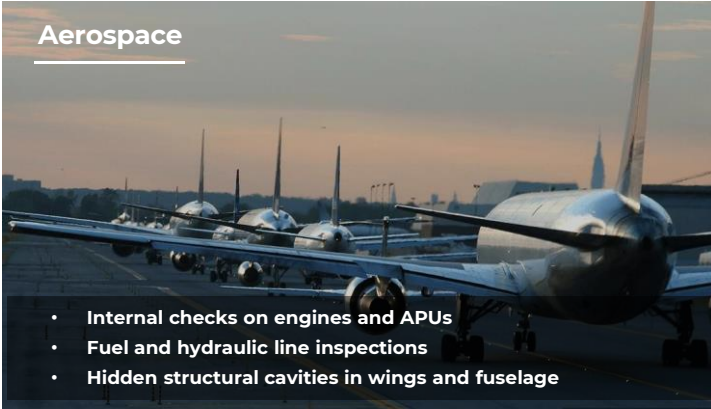
Insertion Probe Options

Probe Diameter (mm)	1.0		1.8		2.2		2.8		3.8/4.2			6.0/8.0		
View	Front	Front	Side	Front	Side	Front	Side	Front	Side	Dual	Front	Side	Dual	
Resolution	400 x 400	400 x 400		400 x 400		720x 720		1280 x 720			F: 720 x 720 S: 400 x 400	1280 x 720		
DOF (mm)	3-50	5-50	1-25	5-50	1-25	5-50	5-50	10-100	5-50	5-50	10-100			
FOV	120°							120°	90°	120°	120°			
Effective work Length	1m	1-1.5m		1-5m							1-10m	1-10m	1-3m	
Articulation	-	2-way		360°/2-way		360° All Way								
Bending angle	-	210°												
Light source	Fiber	LED Fiber	LED Fiber	LED	LED Fiber	LED	LED	LED	LED	LED	LED Fiber	LED	LED Fiber	
Light source regulation	Five-step light source control (via handset)													

Note: Some probes listed with a 1280 x 720 (1 megapixel) are also available in 1920x 1080 (2 megapixel) resolution. Contact AIT for details.
Note: Select probe diameters are available in lengths up to 30 m (100 ft.). Contact AIT for details.

Made for the world's toughest inspections

Aerospace



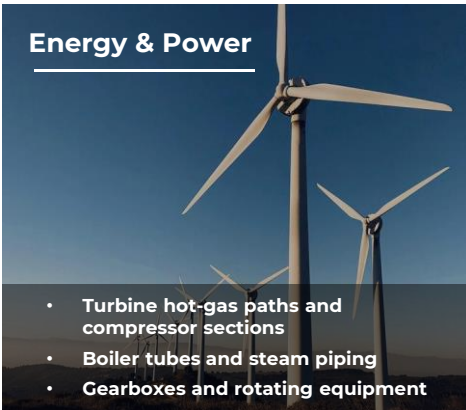
- Internal checks on engines and APUs
- Fuel and hydraulic line inspections
- Hidden structural cavities in wings and fuselage

Defense



- Weapon barrels and launch tubes
- Power-train internals on armored vehicles
- Quality review of critical welds and joints

Energy & Power



- Turbine hot-gas paths and compressor sections
- Boiler tubes and steam piping
- Gearboxes and rotating equipment

Manufacturing



- Weld seams on tanks and reactors
- Welded or brazed tube bundles in heat exchangers
- QA for confined cavities

Metal Castings

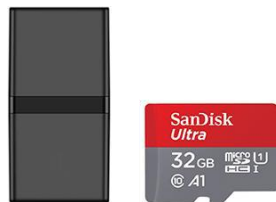


- Internal passages in cast parts
- Surface checks on machined cavities
- Final QA of gears, housings, and pump bodies

Included in the Carry-on Case

1 TF Card & Reader

Includes a 32 GB TF card with USB reader; supports cards up to 128 GB.



2 Battery & Charger

Hot-swap battery delivers 4+ hours per pack. Dock supports fast charging and accepts PD power banks for field top-ups.



Technical Specifications

Design	Hand-held, modular design	Articulation	Servo-motor driven articulation
Display	5.7-inch HD touchscreen	Probe Positioning	Articulation lock with fine adjustment
Image Format	PNG	Video Format	MP4
Display Resolution	1920 × 1080	Working Time	≥ 4 h; supports charging while in use
Shell material	PC + ABS	Battery Capacity	11.1V / 3200 mAh Li-ion
Housing Material	Titanium alloy	Storage Medium	microSD card
Probe Material	Wear-resistant tungsten braid	Overall size	13.1 × 6.6 × 5.2 in (334 × 167 × 132 mm)
Video Output	HDMI mirroring	Weight (including probe)	≈ 3.5 lb (1.6 kg)
Audio Output	3.5 mm headset jack	Compatibility	1.0 – 8.0 mm interchangeable probes
IP Rating	Probe and lens rated IP 64	Operating system	Real-time, multi-task OS
Data Interfaces	USB-C port, microSD Card slot, 3.5 mm audio, HDMI		
Comes With	Carry-on hard case, videoscope, battery, charger, microSD card & reader, data cable, operating manual, shoulder straps		



Advanced Inspection Technologies

