

Mentor Zoom PTZ camera system

A future-proof PTZ camera built to help you
get more done faster — today and tomorrow





Clarity isn't a buzzword. It's the difference between guessing and knowing.

As inspection demands increase and timelines shrink, too many systems promise innovation while delivering complexity, compromises, or both.

Mentor Zoom was designed for inspectors who don't have patience for that. It combines uncompromising image quality, lightning-fast PTZ control, and field-ready portability features in a single, future-proof system. Less inconsistency. Less time spent on tedious tasks. No tradeoffs.

Optics on the cutting edge

The only future-proof, AI-ready PTZ camera that gives you best-in-class image quality, digital capabilities, and the latest 3D digital twin.

Impeccable image quality

See what matters. Miss nothing.

- Two camera head sizes: 70 mm and 130 mm
- Full HD 1080p imaging at 60 fps with ultra-low latency
- 10x and 30x optical zoom options

Ultimate clarity

Bright where you need it

- 4000-lumen illumination
- User-swappable, custom light modules

Precise repeatable inspections

If you can't repeat it, you can't trust it

- Textured 3D environmental views for easier repeat inspections
- One-button generation of textured 3D models in minutes
- Ready for digital twin workflows via 3D scanning and point-cloud meshing

AI-enabled

The Mentor Zoom is built for a new era of on-device AI. With its integrated AI accelerator, the system is ready to grow smarter over time as next-generation AI capabilities emerge.



Inspection power shouldn't be tied to a wall outlet

Mentor Zoom goes wherever the job takes you, with no-tools setup, longer-lasting battery operation, and field-ready durability — compliant across more than 25 countries.

Practical by design

Built for real work in real conditions

- Removable, glove-usable touchscreen
- Integrated joystick control
- No-tools quick pole attachment
- USB-C and USB-A accessory ports
- Up to 140 m camera cable on a single-person portable reel

Rugged construction

Designed to survive environments that destroy lesser systems

- IP68 rated
- Operational underwater up to 40 m
- Entire system fits into a single transportable hardshell case
- Ruggedized to last in field conditions
- Radiation-resistant for nuclear industry applications

Uninterrupted operation

No shutdowns. No waiting for slow reboots.

- Up to 3 hours of continuous battery operation
- Dual hot-swappable batteries provide continuous operation





Speed without precision is useless. Precision without speed is expensive.

Mentor Zoom delivers both, automating the most tedious steps in an inspection so your team can focus on decisions, not documentation.

Lightning-fast operation

Seconds add up.

- Fast, precise PTZ camera head movement
- Reliable focus and exposure control
- Tap-to-point and zoom-to-rectangle touchscreen controls

Consistency

The same inspection. Every time. Every inspector.

- Simple, repeatable and consistent inspections
- Easy to build, easy to use digital twin functionality

Simplified reporting

Inspection results, documented before you leave the site.

- On-device annotations with 3D awareness
- Direct cloud backup and data sharing
- Seamless integration with Waygate Technologies' InspectionWorks, an NDT software platform to streamline inspection processes and standardize data collection and reports while improving collaboration and consistency.

Mentor Zoom technical specifications

Camera head specifications

	130 Camera	70 Camera	
Imager	Image Resolution	Full HD (1920 x 1080)	Full HD (1920 x 1080)
	Frame Rate	60 fps	60 fps
	Zoom	30x optical, 12x digital	10x optical, 16x digital
	Image Sensor	1/2.8 in CMOS, 2.38 MP	1/2.8 in CMOS, 5.14 MP
	Focal length range	4.3 mm–129 mm	3.3 mm–33 mm
	Field of view (in air)	63.7° [wide end] - 2.3° [tele end]	58.2° (wide end) - 6.9° (tele end)
	Min. focus distance	10 mm (0.4 in) [wide end] - 1200 mm (47 in) [tele end]	10 mm (0.4 in) [wide end] - 800 mm (31.5 in) [tele end]
Lights	Luminous flux	4000 lumen	1000 lumen
	Spot-Lights	2 LEDs (9°) (in ext. module)	4 LEDs (9°) (integrated)
	Flood-Lights	2 LEDs (60°) (in ext. module)	none
	Brightness	6900 lx@1 m, 1758 lx@3 m	4549 lx@1 m, 533 lx@3 m
Motion	Pan	360° continuous	360° continuous
	Maximum pan speed	39°/s	39°/s
	Tilt angle range	318° (-159° to +159°)	300° (-150° to +150°)
	Maximum tilt speed	39°/s	18°/s
Clutch Protection	for pan and tilt	for pan and tilt	
Laser Dots	Distance between parallel laser dots	59 mm (2.32 in)	27.5 mm (1.08 in)
	Dot Laser	Class 1 Red Laser (635 nm)	Class 1 Red Laser (635 nm)
3DLoc	3D Scan Range	100 mm (3.93 in) to 25 m (82 ft)	150 mm (5.9 in) to 2.4 m (7.87 ft)
	Scanner Type	Module: Rotating LIDAR	Integrated 8x8 ToF Array
	Scanning Laser	Class 1 Infrared Laser (905 nm)	Class 1 Infrared Laser (940 nm)
	Colored 3D Mesh	Yes	Yes
	Integrated IMU	Yes	Yes
Physical	Weight	With 2-LED modules: 3.06 kg (6.75 lbs.) With 4-LED module and LiDAR: 3.49 kg (7.7 lbs.)	1000 lumen
	Housing Material	Anodized aluminum	Anodized aluminum
	Dimensions (LxWxH) and LiDAR: 3.49 kg (7.7 lbs.)	With 2-LED modules: 368 mm (14.48 in) x 129 mm (5.08 in) x 108 mm (4.26 in) With 4-LED module and LiDAR: 403.5 mm (15.89 in) x 129 mm (5.08 in) x 108 mm (4.26 in)	256 mm (10.08 in) x 70 mm (2.76 in) x 65 mm (2.56 in)
	Outer Diameter	129 mm (5.08 in)	70 mm (2.76 in)
Environment	Ingress Protection	With 2-LED modules: IP68, waterproof up to 40 m (131 ft) below surface, with internal pressurization With 4-LED module and LiDAR: IP65	IP68, waterproof up to 40 m (131 ft) below surface, with internal pressurization
	Radiation Tolerance	max. total dose 42'300 rad (423 Gy) at 1'500rad/h (15 Gy/h)	max. total dose 42'300 rad (423 Gy) at 1'500 rad/h (15 Gy/h)

Peripherals specifications

	Length	Package	Diameter
Camera Cables	10 m / 30 ft	Coiled	8.2 mm (0.32 in)
	30 m / 100 ft	On Reel, no slipping	8.2 mm (0.32 in)
	70 m / 230 ft*	On Reel, no slipping*	8.2 mm (0.32 in)
	140 m / 460 ft*	On Reel, no slipping*	8.2 mm (0.32 in)
	*Slipping Version in Planning		
Custom Lengths up to 250m (800ft) available on request			
Control Unit	Batteries	2 hot-swappable Li-Ion batteries, each with 14.4 V DC voltage and 97 Wh capacity	
	Power Autonomy	1.5 to 3 hours (on 2 charged batteries)	
	External Power Adapter	Input: 100–240V AC 50–60 Hz 2.0 A Output: 48 V DC 3.13 A	
	Operation without Batteries	Yes (with 48V DC from AC adapter connected)	
	Camera Port	Connects one camera cable	
	USB Ports	2 USB 3.0 Type-A 1 USB 3.0 Type-C	
	Video Signal Port	HDMI	
	Wireless Connections (radio enabled units only)	Wi-Fi 802.11ac, 2.4/5 GHz Bluetooth® 5.02 (backward compatible)	
	Computer	Intel 11th Gen, 16 GB RAM	
	Storage Capacity	256 GB user data storage SSD	
	Weight (including two batteries)	4.93 kg (10.87 lbs.)	
	Dimensions (LxWxH)	376 mm (14.81 in) x 236 mm (9.3 in) x 146.5 mm (5.77 in)	
	Ingress Protection	IP65 (with all covers installed and closed, no AC power connected)	
Handheld Pendant	Touchscreen	10.2 in TFT (1920x1080), brightness: 1200 cd/m ²	
	USB Port	1 USB 3.0 Type-C	
	Cable to Control Unit	3 m (9.84 ft) cable	
	Weight	2.0 kg (4.14 lbs.)	
	Dimensions (LxWxH)	360 mm (14.17 in) x 200 mm (7.87 in) x 50 mm (1.97 in)	
	Ingress Protection	IP65	

Environment for Mentor Zoom System Operation

Altitude above Sea Level	Up to 2000 m (6561 ft)
Conditions of use	Indoor
Temperature	-18°C to 45°C (0°F to 113°F)
Humidity	Up to 95%

Get a demo of Mentor Zoom

