

HA3LX



HA3LX Explosion-proof Acoustic and Methane Laser Camera,
Pressurized Leak Detection and Concentration Measurement

Key Features

- Acoustic and Methane Dual Detection
- 144 Low-noise MEMS Microphones
- TDLAS-based Methane Laser Measurement
- Long-distance Methane Detection
- Explosion-proof Protection
- Leak Localization and Quantification
- Multiple Inspection Modes
- Real-time Leak Point Visualization
- On-device Analysis and Report Generation
- Flexible Data Transfer and File Management



Main Applications

● Methane Leak Detection in Hazardous Areas

Designed for methane inspection in oil and gas facilities, petrochemical plants, gas storage areas, pipelines, compressor stations, and other hazardous industrial environments. The explosion-proof design supports safer operation in areas where flammable gas risks may be present.

● Acoustic Gas Leak Localization + TDLAS Methane Measurement

Acoustic imaging quickly locates suspected gas leak sources by visualizing ultrasonic emissions, while the integrated TDLAS laser sensor measures methane concentration from a safe distance. This dual-detection workflow improves inspection efficiency, reduces uncertainty, and supports non-contact methane measurement in the field.

Specifications

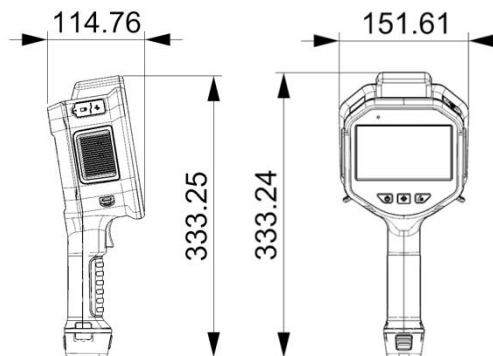
HA3LX Acoustic and TDLAS Camera	
Acoustic sensors	144 low-noise MEMS microphones, real-time sound visualization
Detection bandwidth	2 ~ 150kHz
Methane sensors	TDLAS (0 ~ 50,000 ppm.m)
Laser detection distance	30 m(80% reflectance, gas concentration 3000 ppm.m)
Minimum imaging sensitivity (1 m)	10kHz: 2dB SPL 40kHz: -10dB SPL 60kHz: -5dB SPL 80kHz: 15dB SPL 100kHz: 25dB SPL
Threshold	-30dB ~ 120dB
Scan resolution	From 1° up to 0.125°
Spatial resolution	≤1cm@1m, 40kHz
Operation distance	From 0.3m (1.0 ft) up to 210m (689ft)
Dynamic range	18dB (Multiple Targets)
Leak localization and detection	Automatic leak (vacuum leak) recognition including estimated leak rate, annual cost and CO ₂ emission calculation on camera
Leak rate detection sensitivity	0.032 l/min from 2.5m, 0.004 l/min from 6m, 0.3 l/min from 11.5m @ 120 kPa

Optical & Screen	
Optical camera	13MP
FOV of camera	72°±3°
Lighting	LED Lighting
Resolutions	4K (3840 × 2160), 1080P
Digital Zoom	1 / 2 / 4 / 8
Video image resolution	1920 × 1080 @ 60 fps
HMI	1920 × 1080, Size: 5 in. LCD
Distance measure	Laser rangefinder
Distance	0.1 m ~ 35 m (Max.)
Communications & Storage	
Data transfer	Wi-Fi 2.4 GHz and 5 GHz IEEE 802.11 b/g/n/ac wireless, USB memory disk, Bluetooth 4.2, OTG, FTP, RTSP
Listening	Listening with Headphone
Internal storage	128 GB (Up to 2TB)
External storage	Supports to 2 TB
Cloud storage	Optional
File format	.jpg, .mp4, .lfxs

Specifications

Functions	
Annotation	Text, Voice, Photo, Tags, GPS Info, Directions, Distance
Analysis	On-device analysis with PDF report PC-based analysis with multiple file Cloud based analysis optional
File management	On device file management system
Power Supply	
Camera input power	Standard Type C, PD 2.0
Battery	Nominal input voltage: 7.2 VDC Rated capacity: 4.7 Ah Max. input 8.4 VDC
Operation time	Up to 3.5 h standard mode with 1 battery Up to 7 h standby mode with 1 battery
Charging time	Approx. 2.5 h & PD Fast Charging
Battery charger dock	Input Max. 27 W, output Max. 22.5 W
Charger adaptor	Input 100 ~ 240 V (50/60 Hz) Output 9.0 V, 3.0 A USB-C Standard
Other Data	
Laser sensor type	Class IIIR Laser
Response time	0.2s
Protection level	IP54
Tripod mount	UNC 1/4-20
Camera weight	1100g (within battery)
Dimension	333mm × 152mm × 115mm
Working temperature	-20 °C ~ 55 °C
Storage temperature	-40 °C ~ 85 °C (Without battery)
Relative Humidity	10 % -95 % (Non-condensing)
ATEX	Ex ib IIIC T130 °C Db Ex ib IIC T4 Gb
Shipping Information	
Packaging, type	Air transport containers
Packaging contents	Camera Battery (2) Battery charger (USB-C) Battery charger dock Power cable (USB-C) Wrist strap Hard transport case USB memory stick Memory card slot reader Quick Start Guide Test report Warranty card
Packaging, weight	5 kg
Packaging, size	450 × 350 × 250

Dimension draw



Please note that parameters are subject to change, and we encourage you to refer to Hertzinnno's official announcements for the most up-to-date information.
Hertzinnno reserves the right to provide final explanations for any changes that may occur.

Safety Notice & Disclaimer

Laser Safety Warning

*When operating the laser rangefinder, **NEVER aim the laser beam at human eyes or reflective surfaces.***

LED Light Warning

*Avoid **prolonged direct viewing of LED light sources** (may cause temporary visual discomfort)*

HERTZINNO **shall not be held liable** for any equipment damage or personal injury resulting from **non-compliant operation** (including but not limited to failure to read manuals, laser misuse, etc.).

Users assume all risks and legal consequences arising from failure to follow safety instructions.

For technical or sales support, please visit:
www.hertzinnno.com