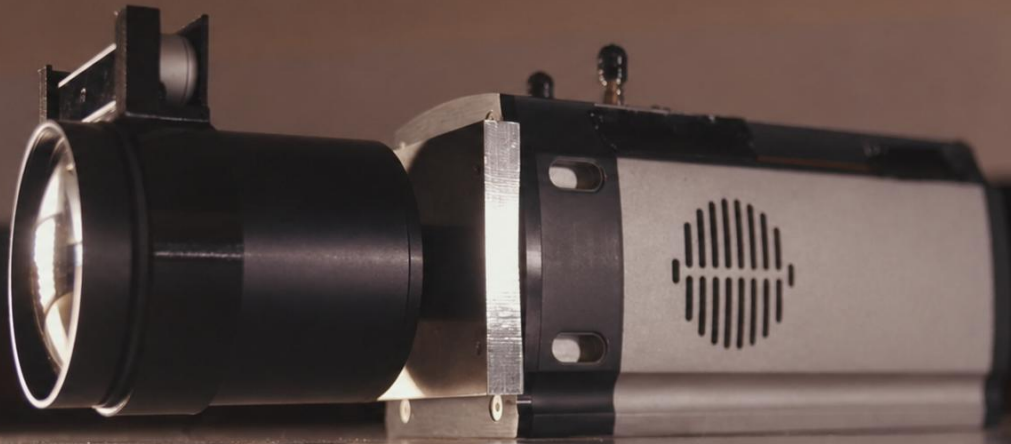




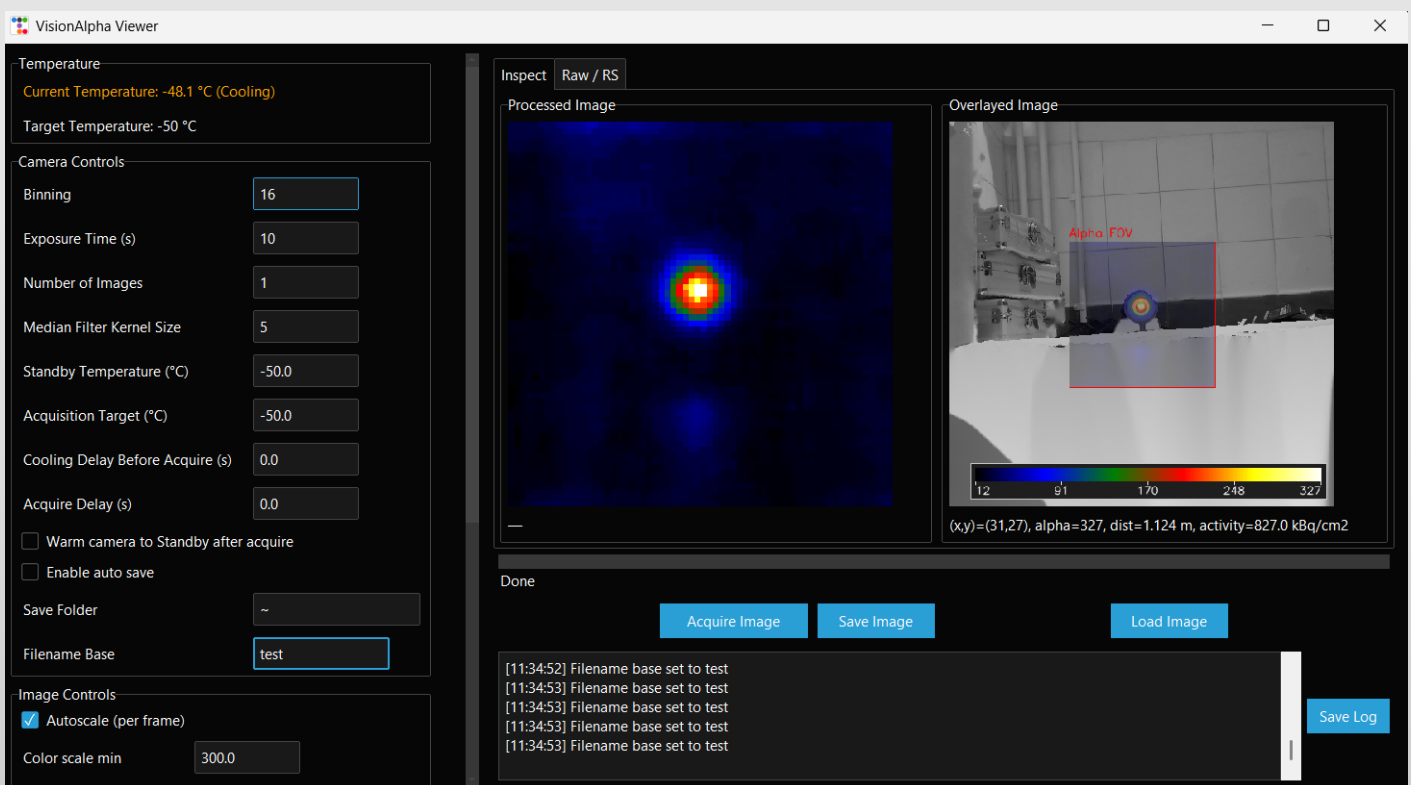
VisionAlpha

ALPHA CAMERA

LONG-RANGE IMAGING OF ALPHA RADIATING EMITTERS



VisionAlpha camera remotely detects, localises and quantifies alpha contamination by imaging the faint UV light generated as alpha particles travel through air.



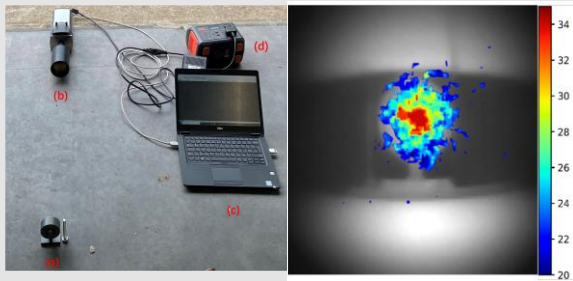
Feature Highlights

- ✓ Detects metal uranium (500Bq/cm² surface alpha activity) at 1 meter distance.
- ✓ Operates across different lighting environments.
- ✓ Overlays the alpha signal onto the visible background for precise localization.
- ✓ Show alpha activity by clicking any pixel in the image.
- ✓ Supports auto image capture, data saving and remote operation via Wi-Fi/4G.
- ✓ Generates one-click reports using local large language model and image recognition.

Specification	Value
Field of View	16 degrees
Optimal Detection Distance	1-2 meter, or longer if required
Resolution	64 x 64 to 256 x 256
Minimal Detection Ability (1 meter)	Indoor: 500 Bq/cm ² in 1 hour Sunlight: 1 MBq/cm ² in 10 minutes
Power	100 - 240 VAC, 48 W max
Weight	3.5 kg
Dimensions	Around 100 x 100 x 380mm



The camera achieves its highest sensitivity when sunlight is absent. Indoor tests show that simple light-blocking material is sufficient for operation.



For outdoor operation, the system can operate under sunlight with reduced sensitivity. A portable power supply supported 4 hours of operation during testing.



The system can be integrated with drone or robotic platforms using a stabilizer for remote and large-area inspection.

Potential Applications

Gloveboxes & fuel processing · Decommissioning · Waste management · Nuclear forensics · Contaminated facilities · Uranium enrichment assessment

SEEKING PILOT PARTNERS

Supported by Innovate UK, VisionAlpha can contribute towards development and trial costs.



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