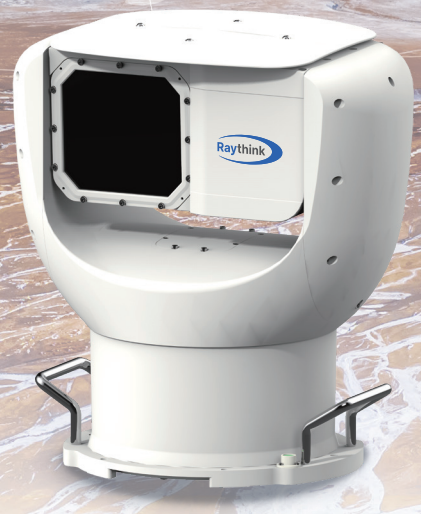
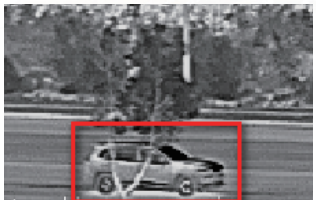
Raythink | Raytron Industrial

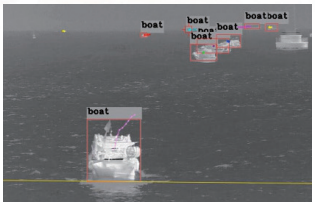
SilentW-U12 Series

Infrared Panoramic Camera

SilentW-U12 is a solution for large area monitoring by using a 12μm 1280×1024 HD thermal detector and capturing 360° panoramic image. SilentW is able to detect multiple objects at same time and can be widely used in nature reserve area, oil/gas fields and mines to make a comprehensive security solution.







Industry-Leading Infrared Detector

Powered by the latest 12 μm uncooled infrared detector and advanced infrared imaging algorithms, it delivers clearer images at longer ranges.

Embedded Networked Device

Supports mainstream and industry-standard protocols, with network interfaces for easy deployment and seamless integration.

Intelligent Detection Algorithm

Deep learning AI algorithm to recognize human, vehicle, ship, and commercial drones.

360° Panoramic Monitoring

Detects a full circle in approximately 2 seconds and delivers real-time panoramic video images, enabling comprehensive visual monitoring without blind spots.

Link with PTZ Camera

Easy calibration, link with dual-spectrum PTZ camera to track the target. Using zoom lens to view more details from long distance.

Enhanced Reliability

Built with a corrosion-resistant housing, dynamic sealing, and solar and salt spray resistance for reliable operation in harsh environments.

Specifications	SilentW-U1255	SilentW-U1275
	Imaging Parameters	
Detector Type	Uncooled VOx FPA	
Spectral Range	8~14μm	
NETD	⩽35mK(@25°C,F#1.0,25Hz)	
Maximum Image Resolution	1280×1024	
Pixel Pitch	12μm	
Focal Length	55mm	75mm
Image Resolution	28672×1024	39200×1024
Scanning Speed	2s/360°	2.2s/360°
FOV	360°×12.7°	360°×9.4°
IFOV	0.218mrad	0.16mrad
	Pan-Tilt Parameters	
Pan Range	360°	
Tilt Range	-20°~35°	
Panoramic / Staring Mode	Supports	
	Network Functions	
Platform Integration	ONVIF/SDK/API	
	Video Parameters	
Image Format	JPEG	
Video Compression Standard	H.264/H.265	
	AI Functions	
AI Recognition	AI Analytics with Human, Vehicle, Vessel, and Other Object Recognition	
AI Detection	Supports Area Intrusion	
Alarm Linkage	Recording / Snapshot / Email / PTZ Linkage	
Fire Spot Detection	Supports	
	System Interfaces	
Power Interface	DC 18–36 V (30 V Typical)	
Communication Interface	1 × RJ45 10/100 Mbps Adaptive Ethernet Port	
Storage Interface	Supports MicroSD Card (up to 1 TB)	
	General Specifications	
Operating Temperature & Humidity	-40°C~+60°C；<90%RH	
Ingress Protection	IP66	
Power Consumption	Steady-State Power Consumption <35 W; Peak ⩽80 W	
Dimensions	382×260×386mm(W×H×L)	
Weight	22kg	
	Motion Detection Range	
Lens Configuration	55mm	75mm
Person (1.8 × 0.5 m)	1.1km	1.6km
Vehicle (1.4 × 4.0 m)	3.1km	4.3km
	AI Recognition Range	
Lens Configuration	55mm	75mm
Person (1.8 × 0.5 m)	0.6km	0.8km
Vehicle (1.4 × 4.0 m)	1.8km	2.4km

*Target detection range refers to the maximum range under ideal conditions.

Application Scenarios

Land Perimeter Security

Coastline Perimeter Security

Airport Security

Critical Site Security

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*The information is for illustrative purposes only. The pictures and technical specifications are subject to change without notice. Sample No.: G2026-SilentW-U12-2P001