VAISENSE
AI Security Solutions

Any Camera. Instant AI.

Serious Security.
Surprising Simplicity.

VAISENSE

AI Security Solutions

VAISense by LatticeWork offers a broad set of tools to enhance your security system with the vigilance, reliability, and insights of Edge AI, whether you're upgrading an existing setup or implementing a new one. Security solutions available from VAISense include:

- People Detection and Tracking
- Intrusion Detection
- Weapon Detection
- Gunshot Detection
- Vehicle and Plate Detection
- NVR/VMS Capabilities

Filter prior video recordings by date range and a variety of descriptive parameters such as objects seen, their color, and more.

Identify Risks Sooner

Monitor dozens of cameras and sensors simultaneously without the risks of distraction or fatigue. Receive accurate and prompt notifications, along with remote access to local recordings, enabling swift assessment and intervention as needed.

Utilize Security Staff Better

Enhance your existing security staff's situational awareness, providing them with meaningful insights, and leveraging their expertise rather than just their time.

Save Time and Money

Early interventions, fewer false alarms, and more efficient staff utilization all contribute to cost savings. VAISense solutions can often be integrated with existing camera setups, saving on hardware and installation cost as well.

Own Your Data

In contrast to cloud AI solutions with questionable privacy practices or which may be subject to hostile foreign governments, our Edge AI solution keeps you in full control of your data, including what is collected and who has access to it.

Correlate footage of the same individual recorded across multiple cameras.

VAISENSE
by LatticeWork

Existing Cameras

Remote Cloud Dashboard

Any Camera Instant AI

On Premise AI Hardware

Supercharged Security

Transform your security infrastructure with Edge AI technology for advanced monitoring and threat detection. Upgrade existing systems or deploy new solutions with comprehensive capabilities including intrusion alerts, vehicle monitoring, face tracking, and weapon detection.

LatticeWork

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2F-1, No. 298, Ruiguang Road, Neihu Dist., Taipei City 114,Taiwan (R.O.C.) | +886 02-8979-6136 | vaisense.com
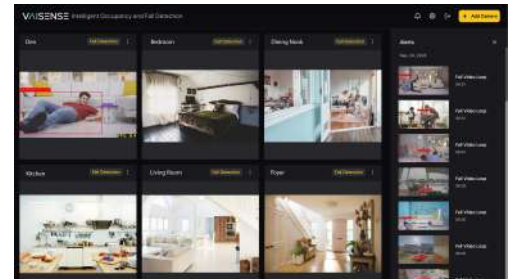
Worksite Safety

Safeguard workplace safety and maintain compliance through AI-powered monitoring that detects proper PPE usage and identifies potential hazards, including fire risks, in real time.
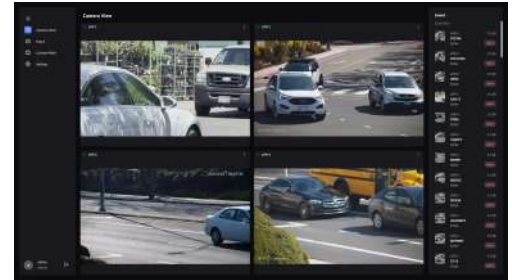

Occupancy and Fall Detection

Enhance healthcare facility efficiency with AI monitoring of waiting room capacity and automated fall detection. Alert staff immediately to patient incidents without requiring wearable devices or constant video observation.
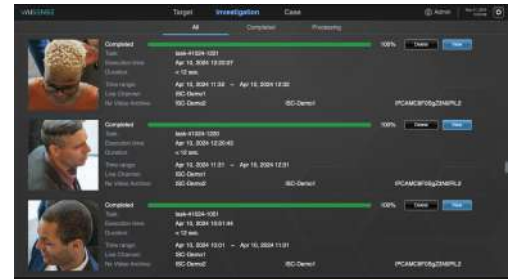

License Plate Recognition

Deploy advanced AI-powered license plate recognition to streamline facility access control and enhance security operations, with real-time identification and automated response capabilities.
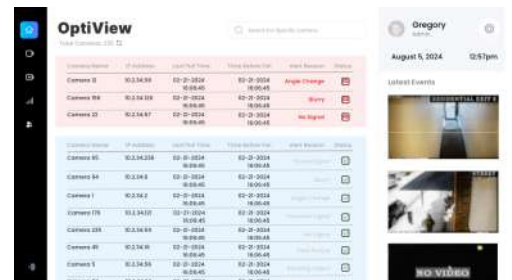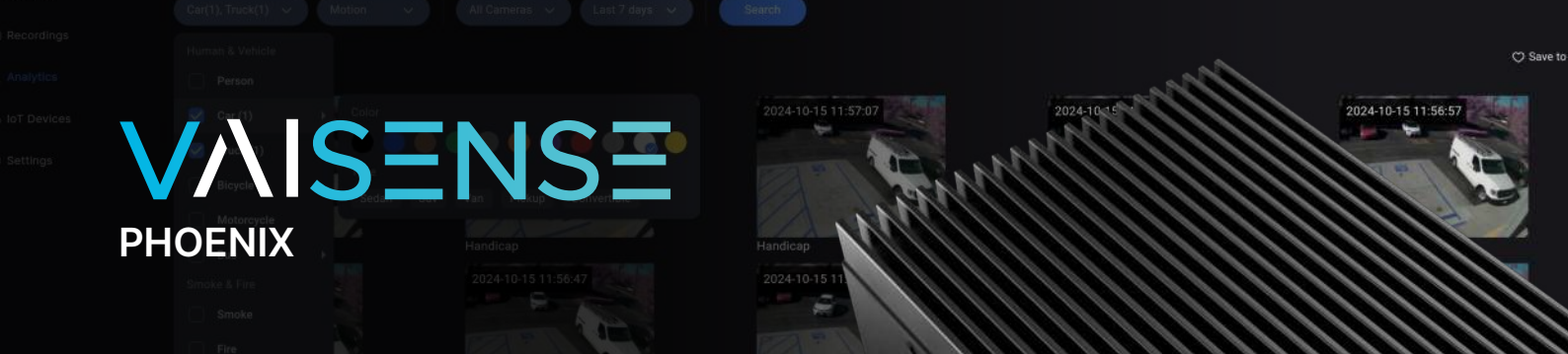

Person Tracking

Track and monitor individuals across multiple locations, with both real-time and historical movement analysis. Generate detailed reports to document patterns and share findings with key stakeholders.

Camera Reliability Assurance

Are your AI-enabled cameras running smoothly? If a camera was tampered with, how would you know? Enhance surveillance reliability through AI-powered monitoring that automatically detects visual obstructions, connectivity failures, and more, ensuring optimal system performance.

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VAISENSE
PHOENIX

Unparalleled Performance in an Efficient Edge-AI Server

The VAISense Phoenix redefines NVR systems with powerful AI processing, supporting 20+ cameras in a compact design. Equipped with an Intel N-series processor and advanced AI accelerators from DeGirum, Hailo, MemryX, and others, it outperforms most GPU-based solutions while using under 20 watts of power. With up to 4TB of storage, it securely handles 4K video for investigations. Optional WiFi/5G, Zigbee, and GPIO connectivity enhance its versatility. Custom hardware is available for higher channel needs.

Edge AI-Powered Analytics

Choose from a range of AI tools that integrate with existing cameras. Enable features like person tracking, occupancy monitoring, PPE compliance, smoke detection, and more, improving situational awareness, safety and efficiency.

High-Definition Surveillance

Experience clear imaging up to 4K resolution with local storage options. Ensure precise monitoring and enhanced visibility without constant cloud connectivity.

Private and Secure Edge Processing

Utilize on-device computation for faster response and autonomous operation. Maintain data security and privacy compliance by avoiding the need to send sensitive information to the cloud.

Flexible and Future-Proof Integration

Integrate seamlessly with existing IP security cameras and IoT devices. Adapt and scale with evolving security needs and AI advancements.

Durable, Low-Maintenance Design

Benefit from a fanless and rugged design for indoor and outdoor use. Minimizes maintenance and eliminates routine clean-outs.

Secure Remote Access

Use optional VAISense cloud portal integration or direct access URL for secure remote access to the device from any location. Enjoy instant alert management and system oversight.

Reduced Operational Costs

Reduce cloud storage, bandwidth, and processing costs by leveraging edge computing, optimizing operational expenses while maintaining high performance.

Available AI Applications

VAISense
Security

VAISense
Construction

VAISense
LPR

VAISense
OptiView

VAISense
Track

VAISense
Health

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Key Component & Feature

Main Processor	Intel Alder Lake-N N97/i3-N305
System Memory	8GB/16GB LPDDR5@6400MHz
Onboard Storage	64GB eMMC
On board AI chip	DeGirum ORCA
M.2 2280 M key slot	2280 for SATA/NVMe gen3×1 2280 for NVMe Gen3×2
M.2 3052 B key slot (reserved)	M.2 B key 3042/3052 for 4G/5G module
M.2 2230 E key slot (reserved)	2230 CNVi Wi-Fi/BT Module
Front I/O connector	1x Com Port for RS232482/485(DB9) 1× 40pin GPIO connectors (SPI/PWM/UART/I2C/GPIO)
Rear I/O Connector	2x RJ45 MI 2.0b Tx up to 4K@60Hz 1x DP, 1x DP 1.4 via USB type C 1x DC Jack 1x USB 3.1 Gen1 Type-A 1x USB 3.1 Gen2 Type-C 2x USB 2.0 Type A
Side I/O connector	Antenna SMA connector x6 including 4×5G/GPS, 2x Wi-Fi/BT or 1 for Zigbee/BLE Micro SD card slot
Button	Power button with LED, Reset button
System Power	12v/19v 60/90W DC with External Power Adapter
Enclosure Dimension	165 × 115 × 55 mm 6.45 × 4.53 × 2.17 in
Buzzer	Buzzer
Audio	Dual MEMS Mic Embedded, audio jack (in/out)
TPM	TPM 2.0
Zigbee module	Reserved
Ethernet	1× 2.5 Gigabit + 1x Gigabit
Certification	CE/FCC/UKCA/BSMI/VCCI/ICES/UL/CB/ERP/WEEE/REACH/ROHS
Operating Environment	0~55'C with air flow 0.5m/s
Battery	RTC
Optional connectors (PCBA only)	1x EDP, 2x MIPI Camera, 1x fan
Optional Accessories	VESA mount and L bracket Thermal protection cover

Models

Phoenix N97

- N97 CPU
- 16GB Memory
- 1 ORCA AI Acccelerator
- 24 VAISense Security Channels
- 12 License Plate Recognition Channels

Phoenix N305

- N305 CPU
- 16GB Memory
- 1 ORCA AI Acccelerator
- 32 VAISense Security Channels
- 24 License Plate Recognition Channels