

# AI Surveillance Station



## Empowering Existing Surveillance with AI Intelligence

PLANET AI Surveillance Station is designed to seamlessly enhance existing surveillance infrastructures by introducing intelligent video analytics at the edge. While preserving existing surveillance infrastructure, it enables organizations to upgrade traditional surveillance into a smarter, more responsive security framework. By integrating directly into existing network environments, businesses can simplify deployment and improve operational efficiency.

### AI Surveillance Station Empowering Existing Surveillance with AI Intelligence



## Real-Time AI Detection for Smarter Security Operations

Equipped with advanced AI capabilities, the system delivers real-time detection across a wide range of scenarios, including:

- Illegal vehicle entry detection
- Vehicle timeout / stay detection
- Line-crossing detection
- Area intrusion detection
- Crowd counting detection
- Loitering time detection
- Cat and dog detection
- Whitelist/blacklist face recognition
- Helmet and safety vest detection
- Fire and smoke detection

## Hardware

- High-performance 64-bit quad-core CPU for real-time AI video analytics
- Built-in 13 TOPS AI acceleration engine for real-time edge AI inference
- 1TB NVMe SSD storage for high-speed storage of video metadata and event records
- 1 × Gigabit Ethernet interface for high-bandwidth video transmission
- Ultra-compact device size (88.7 × 68.2 × 41 mm) for flexible installation in limited spaces
- Operating temperature range 0 ~ 50°C suitable for various indoor monitoring environments
- Low-power edge AI device suitable for continuous surveillance operation

## AI Video Analytics

- Real-time object detection and behavior analysis through edge AI inference
- Supports intelligent event detection including intrusion detection, line-crossing detection and loitering detection
- AI visual recognition capabilities including helmet, reflective vest, mask detection
- Supports smoke and fire detection for early hazard identification
- Built-in pet recognition (cat and dog detection) for specialized monitoring scenarios
- Simultaneous analysis of multiple video streams for improved surveillance coverage

## Intelligent Video Search

- Supports efficient video search through structured filtering and event-based queries
- Enhances video investigation efficiency compared with manual timeline browsing
- Enables rapid retrieval of relevant video segments based on detected events and attributes



### Real-Time AI Detection for Enhanced Operational Efficiency



### System Integration

- Compatible with RTSP IP cameras from various manufacturers
- Supports integration with existing IP surveillance systems
- Enables cost-effective upgrade of conventional surveillance systems to AI-powered monitoring

### Management and Deployment

- Web-based management interface for system configuration and monitoring
- Designed for flexible edge deployment in distributed surveillance environments
- Supports centralized monitoring and intelligent event management (AI Event Hub)
- Compact edge AI platform suitable for industrial, retail, campus and smart city applications

It enabling comprehensive situational awareness across diverse environments such as factories, campuses, and commercial spaces. These AI-driven insights help security teams respond faster and operate more efficiently.

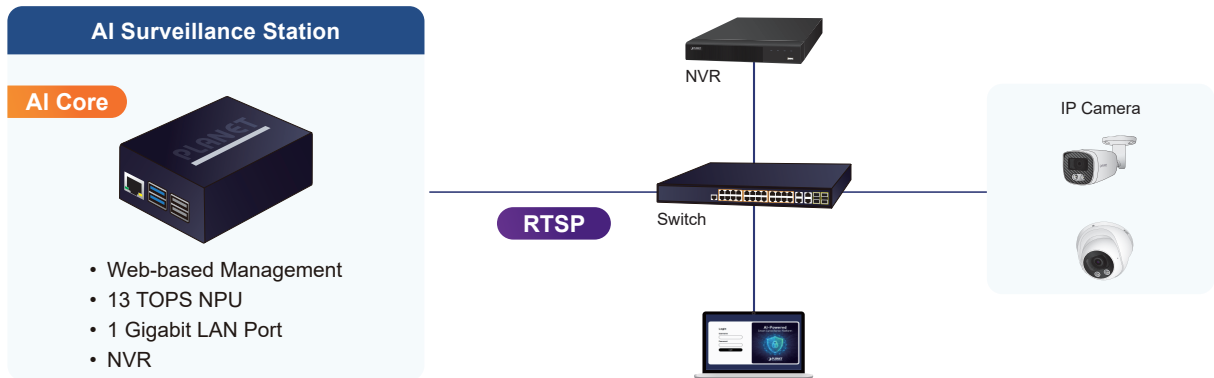
### Centralized AI Event Hub for Efficient Management

At the core of the system is a centralized management platform that consolidates all AI detection results into a unified event hub. Through an intuitive dashboard, users can monitor live video streams, review recent events, and manage alerts in real time. The platform enables efficient event handling, allowing operators to quickly identify critical incidents and take action with improved operational visibility.

## Centralized AI Surveillance Management

Unified Platform · Easy Deployment · Real-Time Insights





AI Surveillance Station

AI Core

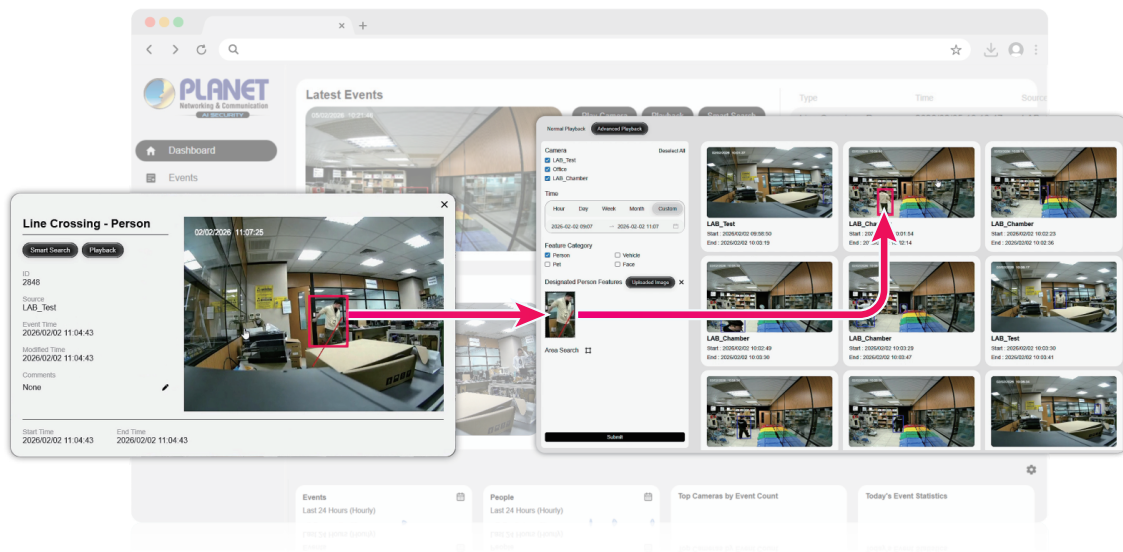


- Web-based Management
- 13 TOPS NPU
- 1 Gigabit LAN Port
- NVR

*Streamlined Investigation with Intelligent Playback and Search*

The AI Surveillance Station enhances video investigation workflows by enabling event-based playback, object tracking, and attribute filtering. Users can quickly locate relevant footage through structured filtering methods such as human detection, region-based search, and feature matching. This significantly reduces the time required for incident investigation while improving search accuracy and usability.

## Object Tracking in Playback



*Flexible Deployment with Edge AI Architecture*

Built on an edge AI architecture, the system performs video analysis locally, reducing bandwidth consumption and alleviating the need for centralized computing resources. It can operate as a standalone AI node or be deployed across distributed environments, providing flexibility for different scales of surveillance applications. This modular approach allows organizations to expand their AI capabilities gradually as needs evolve.

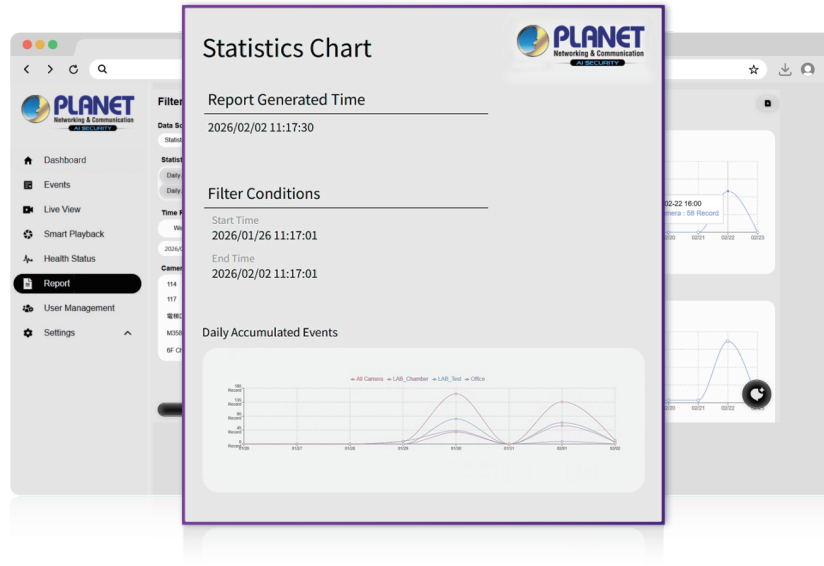
*Advanced Automation and Integrated Security Applications*

Beyond detection and monitoring, the system supports advanced automation capabilities such as virtual patrol and intelligent video playback analysis. It can also be integrated with access control systems, enabling integration with external access control systems, to enhance overall security management. These capabilities extend the value of surveillance systems from passive monitoring to proactive security operations.

### Enhancing Legacy Systems with Future-Ready AI

By bridging traditional surveillance systems with modern AI technologies, PLANET AI Surveillance Station transforms legacy infrastructure into an intelligent security solution. Organizations can extend system lifespan, improve operational efficiency, and gain deeper insights from video data—all while preparing for future smart security applications.

## Auto Report Generation



## Applications

### Smart Surveillance for Industrial and Workplace Safety

In industrial environments, the AI Surveillance Station enhances workplace safety by continuously monitoring compliance with safety regulations. It enables detection of safety equipment such as helmets or vests, identifies unauthorized access to restricted areas, and helps prevent potential hazards before incidents occur. By providing real-time alerts and visual insights, it supports safer operations and reduces risks in factories and production facilities.

### Efficient Security Management for Commercial Spaces

For retail stores, shopping malls, and commercial buildings, the system enhances both security management and operational efficiency through AI-driven video analytics. It supports people counting, loitering detection, and intrusion monitoring, allowing operators to better understand crowd flow and detect abnormal activities. These insights help businesses optimize space utilization, enhance customer experience, and maintain a secure environment.

### Campus and Facility Protection with Intelligent Monitoring

In campuses, office buildings, and large facilities, the AI Surveillance Station delivers comprehensive protection through real-time detection and centralized event management. It enables monitoring of key areas, detection of unusual behaviors, and quick response to incidents. With its intuitive dashboard and event-based management, security teams can efficiently oversee large-scale environments with improved situational awareness.

### Transportation and Public Area Monitoring

The solution is well-suited for transportation hubs and public spaces where continuous monitoring is essential. It can detect crowd density, identify abnormal behaviors such as loitering or intrusion, and supports real-time situational awareness in high-traffic environments. By enhancing visibility across large and dynamic environments, it helps ensure safety and operational continuity.

*Distributed Surveillance with Scalable AI Deployment*

For organizations managing multiple sites, the AI Surveillance Station supports flexible deployment as a standalone AI node or across distributed locations. This makes it ideal for chain businesses, multi-site enterprises, and large-scale infrastructures. With edge AI processing and centralized management, users can maintain consistent security standards while scaling operations efficiently.

## AI-Powered Applications



AI Surveillance Station  
AIS-1000

## Specifications

Product	AIS-1000
<b>Hardware Specifications</b>	
CPU	64-bit Quad-core ARM Cortex-A76 @ 2.4GHz
AI Accelerator	Hailo-8L (13 TOPS)
GPU	Broadcom VideoCore VII
Internal Storage	1TB NVMe SSD
Memory	8GB SDRAM
Networking Interface	1 × 10/100/1000T Gigabit Ethernet (RJ45)
Button	> 10 sec: system shutdown
USB Port	2 x USB 3.0 ports 2 x USB 2.0 ports
Operating Temperature	0 to 50 degrees C
Power Interface	USB Type-C power input
Power Input	5V/5A DC via USB Type-C power connector
Power Consumption	Max. 27W
Enclosure	Metal enclosure
Installation	Desktop and wall-mount
Dimensions (W × D × H)	88.7 × 68.2 × 41 mm
Weight	0.287 kg
<b>Camera and NVR Compatibility</b>	
Camera Compatibility	RTSP IP camera support
Max. Channels	8-channel IP cameras
NVR	Built-in video recording capability
<b>AI Function</b>	
Parking Detection	Illegal Vehicle Intrusion / Idle Timeout Detection
Human Detection	Line Crossing / Area Intrusion / Crowd Counting
Pet Detection	Cats & Dogs
Face Recognition	Whitelist / Blacklist
Industrial Safety Detection	Helmet / Vest
Fire & Smoke Detection	Fire & Smoke

Smart Search System	Object Filtering / Area Detection / Feature Matching (Human / Vehicle / Pet) / Vehicle Attribute Search (e.g., color, type) / Interactive Search Enhancement (LLM-based concept)
<b>Management Functions</b>	
Management Interface	HTTP
System Management	AI parameter configuration Camera IP/device name configuration Camera event parameter configuration Firmware upgrade by HTTP protocol through Ethernet network Configuration upload/download through HTTP NTP System reboot
System Monitoring	CPU/RAM/GPU utilization monitoring Export logs and error reports
AI Model Management	AI model upload/update interface Model version rollback
Event Management	Event/alarm condition configuration Trigger actions (notification/recording)
Real-time Display	Homepage real-time event display Event details with live video stream Incident processing record window
Playback	Event log playback Event replay
Monitoring View	Multi-camera NVR-style interface Multi-screen / single-screen switching Historical person-fragment search
Intelligent Platform	Search-based playback query interface Integrated homepage search optimization
Historical Data	Historical event record query Report generation
User Management	Permission control
Video Compression	H.264 / H.265 H.264+ / H.265+
Video Streaming	RTSP (Sub-stream only)* Resolution: Up to 704 × 576 (D1) Frame Rate: Up to 10 fps Compression: H.264 / H.265 / H.265+ (H.265+ supported for optimized streaming)
Recording Performance	8-channel simultaneous recording Up to 1080P Full HD recording @ 25/30 fps (per channel) Supports 960P / 720P / D1

\*RTSP stream is based on sub-stream for bandwidth-efficient preview and system integration.

## Ordering Information

AIS-1000	AI Surveillance Station
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## Related Products

ICA-3880	H.265+ 8MP Full Color Smart IR Bullet IP Camera
ICA-4880	H.265+ 8MP Full Color Smart IR Dome IP Camera
ICA-4480F	H.265+ 4MP Full Color Dome IP Camera
ICA-M3580P	H.265 5 Mega-pixel Smart IR Bullet IP Camera with Remote Focus and Zoom
ICA-M4580P	H.265 5 Mega-pixel Smart IR Dome IP Camera with Remote Focus and Zoom
NVR-1600	H.265+ 16-ch 4K Network Video Recorder
NVR-E6480	64-Ch Windows-based NVR with 8-Bay Hard Disks
NVR-820	8-CH Network Video Recorder with HDMI

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**AIS-1000**