

Innodisk AI for Surveillance

Innodisk, a global AIoT solutions provider, has developed an AI solution for surveillance. This solution features a CIC (Camera Integrity Check) tool that automatically checks cameras and generates reports. Vague images, black images, and images resulting from unexpected camera movement and camera disconnections are expelled by the CIC.

Challenges & Innodisk AI Solutions



Limited camera support

Innodisk AI's solution is able to support 500 channels for camera checking.



Non-customizable alarms

Alarm mechanisms are able to be adjusted by the customer.



Heavy employee load

CIC is an automatic camera checking tool relieving human resource loads.



Lack of remote management

Support for iCAP (Cloud Administration Platform) allows remote maintenance.



AI recognition inaccuracy

Customized self training AI models increase accuracy of the camera image.

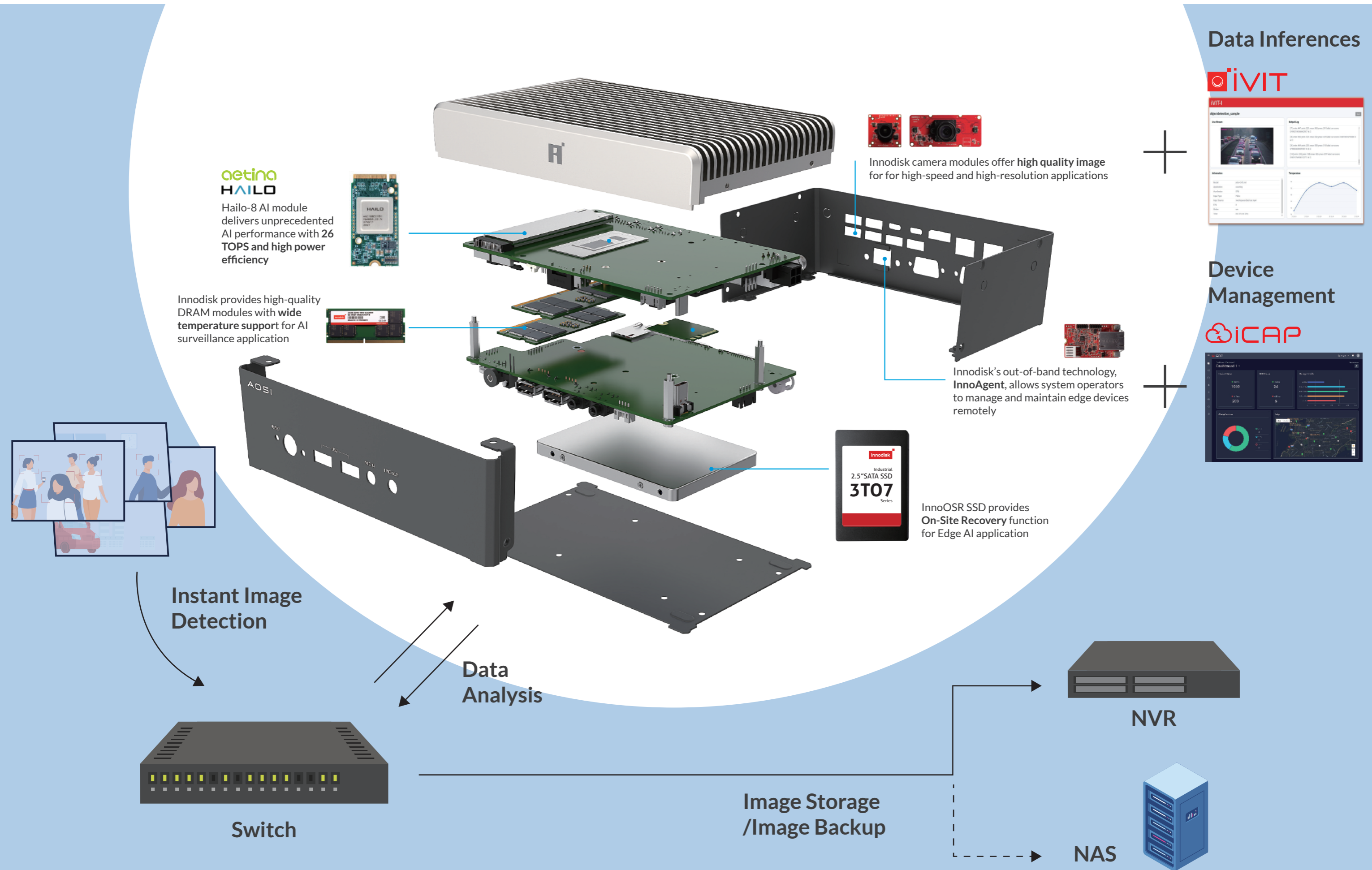


Poor disaster recovery

Out of band signaling with InnoAgent ensures access when the in-band network is down.



Innodisk AI Surveillance Application Architecture



AI in Surveillance Case Studies



Cement Factory

The solutions were successfully deployed in a cement factory in Hualien, Taiwan, to improve surveillance. The primary goal was to reduce accidents in a challenging, dusty environment. The implemented camera checks encompassed monitoring for dust accumulation on the screens, camera focus adjustments, black screens, and unexpected camera movements. These measures significantly contributed to maintaining a high level of security within the facility.

MRT Station

To enhance surveillance capabilities, the Innodisk AI solutions were deployed in an MRT (Mass Rapid Transit), one of the major public transportation stations. Due to the large size of the station and the presence of a substantial crowd, it is challenging for a small team of guards to monitor all the cameras manually. However, by leveraging the Innodisk AI solution with an automated CIC solution, continuous monitoring of all cameras has become feasible. This innovative system detects and alerts for abnormalities, allowing the cameras to record the intended content consistently.



Innodisk AI Edge Solutions

Cloud Management	iCAP Public Cloud / Private Cloud			
AI Training / Inference	iVIT GPU Model ZOO FPGA Model ZOO ASIC Model ZOO 3 rd Party AI Model			
Edge Utility (SW / FW)	iSMART / iTracker / iOPAL / iRAID	OOB Management	Virtual I/O Technology	
OS Integrations	BSP/Driver/SDK porting & optimization Microsoft Windows / Linux			
Edge Device	AIoT Platform (FPGA / GPU / ASIC / CPU) 	AIoT Peripheral (Embedded Card & Camera / Virtual I/O) 	Flash/DRAM Module 	Wi-Fi6/ Media Server Air Sensor CAN

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SSD



Innodisk SSDs are high-performance storage devices designed for industrial and embedded applications. They offer robustness, reliability, and endurance, with features such as power-loss protection, error correction, and advanced data security.

DRAM



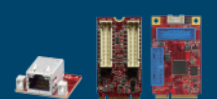
Innodisk DRAM is a high-speed, high-capacity memory module designed for use in a wide range of industrial applications. It features reliable performance, durability, and advanced data protection, making it ideal for harsh environments.

Camera



Innodisk camera modules optimize image quality for different AI applications depending on the needs of customers, in order to meet the demand for high-speed and high-resolution applications in different embedded systems.

Embedded Peripherals



Embedded peripherals like LAN, PoE, CAN bus, DIO, serial port, storage, RAID, and display add functionality to systems. Innodisk aims to create expandable and space-efficient expansion modules to increase flexibility and lower TCO.

aetina



AI solutions for AI training, inference, and computing, powered by NVIDIA's GPU and AI accelerators.

antzer



Communication and system integration enable fleet management and data collection.

MILLITRONIC



Wireless software defined network and virtualized connectivity products for modern applications.

sysinno



Ensures safe indoor and outdoor air quality through sophisticated and robust sensors.