Overview

With AI becoming the engine of digital intelligence economic development, AI has getting into our daily life and become more and more popular. AI edge computing, due to its advantages of low delay, stable and reliable, flexible expansion, has become a new trend of data enabling. AI BOX is a new generation of intelligent analysis equipment integrating hardware and software, which adopts high-speed embedded ARM AI chip and equipped with high-performance self-developed AI algorithm warehouse to analyze video content in real time for analyzing people, cars, objects, abnormal behaviors, abnormal environment, abnormal items in surveillance videos, realizing timely warning, uploading, and evidence collecting for abnormal events, providing added-value for existing surveillance video through equipping a wisdom brain for traditional camera , finally to change passive viewing to active monitoring and warning.

AI box, connected to the AI operation management center, can achieve holographic perception, data aggregation, algorithm scheduling, algorithm update delivery, equipment monitoring and maintenance, alarm pushing and other management functions, to achieve visible, manageable, preventable and usable AI solution.

Appearance

12VDC power supply, OTG debugging, audio input/output, dual gigabit network port, dual USB3.0, RS485, RS232 serial port, DIDO, HDMI, 4G/5G/GPS/WiFi antenna, SIM/TF card

Dimension

195.6 mmx 125mm x 53.5mm (without antenna). It can be mounted on a desktop, wall, or cabinet.

Features

Plug and play: localization HDMI direct display, desktop client visualization, can be used independently, rapid deployment.

Abundant algorithm warehouse capacity, specific AI box to match specific scenarios: hundreds of high performance self-developed AI algorithms, optional algorithm, flexible configuration, to adapt to the plenty of scenarios.

Software defined equipment, cloud and edge fusion: AI central management platform + edge AI BOX, flexible algorithm selection, implement the data gathering, algorithm update delivery equipment operations and maintenance, abnormal event data push with low latency, low bandwidth.
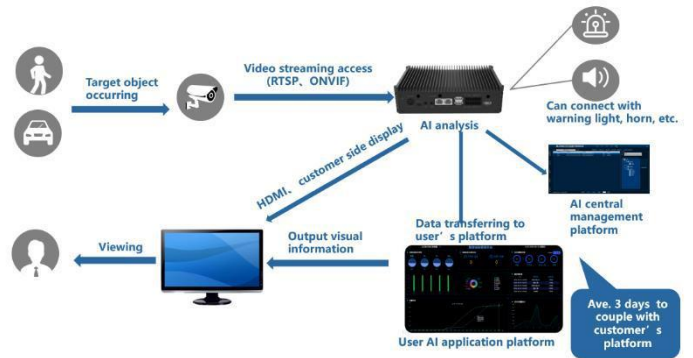
Retrofit existing cameras: compatible with popular video cameras, easy deployment, retrofit existing cameras without changing the original camera video monitoring network to lower cost of intelligent innovation.

Industrial-grade reliability: lightweight, no fan structure, flexible deployment, to adapt to the heavy ash, heavy oil, high and low temperature conditions etc. Open interface, cascade application: standardized interface, can realize the data gathering from different cascading levels.

Application architecture

Algorithm warehouse (hundreds of algorithms, flexible choice)

People and vehicle management: face recognition, whitelist/strangers/blacklist recognition, human body recognition, vehicle detection, license plate recognition, detecting non-motor vehicles recognition, special vehicles recognition, people traffic statistics and vehicle traffic statistics, etc.

Behavior monitoring: regional invasion, warning lines, timeout to stay, climb up, falling/slipping down, tailing, personnel gathering, fighting, running, help gesture, retrograde, subject stands still, etc.

Operation safety monitoring: not wearing a mask, helmet, chef hat, reflective clothes, work clothes; smoking, make a phone call, playing with mobile phone, beyond regional person count limitation, etc.

Environmental monitoring: passageway blockage, lost fire equipment, fire, smoke, fire exits illegally occupied, garbage detection, etc.

On-duty management: personnel leave, sleep and personnel absences, etc.

Intelligent water inspection: floating objects inspection, regional invasion, swimming, fishing, etc.

Application scenarios

Safety management: dangerous chemical enterprises, chemical industrial park, urban activities in a limited space, coal mine, fire protection, etc.

Intelligent supervision: jail, hospitals, long term care, etc.

Intelligent inspection: electric power, telecom infrastructure, server room, water pump room, important warehouse, etc.

Mobile scout: public security, traffic management, etc.

Others: kitchen, smart community, smart building, smart school, bank etc.

Specification

Product type				HYAIoT-NV-P100
CPU				NVIDIA Xavier NX 6 cores /
Computing capability				21 Tops INT8
Memory				8GB
eMMC				16GB
Hard disk				The default SSD is 128GB
Interface				2* Gigabit RJ45 /1*USB3.0/1*USB2.0/1*USB2.0 OTG/1*HDMI/2*RS485/1*RS232 /4*DI 4*DO/ audio input/output
Wireless transmission	Reserved 4G/5G, GPS, WiFi (optional)			
Recommended applied scenarios				Intelligent prison, intelligent Bank network, intelligent production Park, etc.
Video-Algorithm coupling model recommendation	1-2 algorithms for each video.	1-4 algorithms for each video.	1-4 algorithms for each video.	1-4 algorithms for each video.

Note:

1. Some industry algorithms need to reserve some time for dynamic optimization based on scene data.

2. The new algorithm scene can be customized and transplanted to the AI box.

3. AI box management platform can be private deployment.