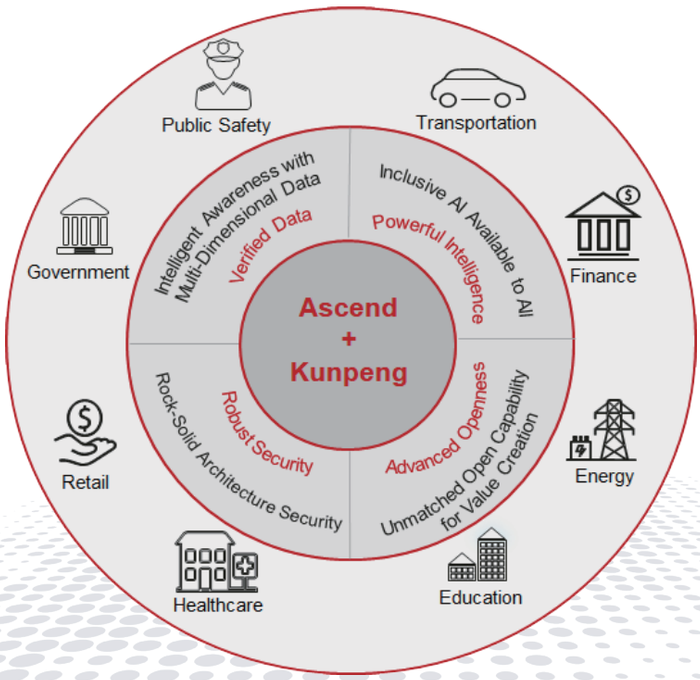
Huawei HoloSens Intelligent Video & Data Analytics Product Portfolio



Cloud Products

CloudIVS 9000

CloudVCN

CloudVCM

ICP

Multi-channel Incident Answering

Converged Dispatch

Visualized command

Video Wall

Edge Products

HoloSens IVS3800

Kunpeng 920

Ascend 310

CloudIVS 3000S
(Based on the Kunpeng platform)
Storage cloud node

CloudIVS 3000C
Compute cloud node

CloudIVS 3000R
Search cloud node

CloudIVS 3000SC
Storage and compute cloud node

CloudIVS 3000CR
Compute and search cloud node

CloudIVS 3000SCR
Storage, compute, and search cloud node

Video Content Node

VCN510-8
8 channels

VCN510-8P
8 channels, PoE power supply

VCN510-16
16 channels

VCN510-16P
16 channels, PoE power supply

VCN520-32
32 channels

VCN540-64
64 channels

Devices

HoloSens SDC

Person Data Structuring Camera

Omni-data Structuring Camera

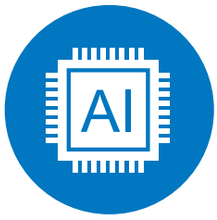
Vehicle Data Structuring Camera

ITS Camera

Situation Awareness Camera

HoloSens SDC

Huawei is dedicated to developing software-defined cameras (SDCs) that are designed to be the catalyst for providing a safe society. SDCs are capable of continuous evolution thanks to advanced innovative AI-assisted vision, multi-dimensional awareness, and network-wide synergy technologies, and meet demands in various fast-growing industries. The SDCs feature professional AI chips, open-ended SDC OS, and rich algorithms and applications, continuously creating values for customers.



Professional AI Chip

AI is not a feature but the core of SDCs. Professional AI chips are the basis for implementing true and powerful intelligence.Huawei SDCs adopt professional NPUs like Ascend chips with a computing power 25 times that of CPUs, enabling trillion-level visual analysis and computing.

Open-ended SDC OS

A dedicated OS runs on SDCs, providing a standard and unified software running environment that implements decoupling between software and hardware. The OS opens service-oriented interfaces for ecosystem building and makes SDCs truly software-defined.Huawei launches the industry's first SDC OS built based on the container technology, enabling multiple algorithms to operate independently. Services are not interrupted even during algorithm upgrade and switchover.

Rich Algorithm and Application Ecosystem

Based on the open-ended OS, a complete ecosystem tool chain is available to implement standard connection, training, and rollout of algorithms and applications. HoloSens store helps build a prosperous ecosystem based on the one-stop application development platform, ModelArts algorithm development platform, and comprehensive technical support services. Various algorithms turn common cameras into dedicated cameras within seconds and add intelligence to a variety of industries.

Person Data Structuring Camera

X1221-F
2MP Face Capture Box Camera

X1281-F 4K
4K Face Capture Box Camera

X2221-FL
2MP Face Capture Softlight Bullet Camera

X2221-FLG
2MP Face Capture Softlight Bullet Camera

X2221-CL
2MP Face Recognition Softlight Bullet Camera

X2241-FLI
4MP Super Starlight SuperColor Face Capture Bullet Camera

X2261-FL
6MP Face Capture Softlight Bullet Camera

X3221-C
2MP Face Recognition IR Fixed Dome Camera

M1221-F
2MP Face Capture Box Camera

M2120-EFL(7-35mm)
2MP Face Capture Bullet Camera

M2121-EFL(8-32mm)
2MP Face Capture Bullet Camera

M2121-EFL-Sf(8-32mm)
2MP Face Capture Bullet Camera

M2140-EFL(6mm)
4MP Face Capture Bullet Camera

M2140-EFL(7-35mm)
4MP Face Capture Bullet Camera

M2221-FL(8-32mm)
2MP Face Capture Softlight Bullet Camera

Omni-Data Structuring Camera

X1221-H
2MP Multi-Algorithm Concurrency Box Camera

X2221-HL
2MP Multi-Algorithm Concurrency Bullet Camera

X2241-HL
4MP Multi-Algorithm Concurrency Bullet Camera

X2281-HL 4K
8MP Multi-Algorithm Concurrency Bullet Camera

X2382-HL(12-84mm) 4K
8MP Multi-Algorithm Concurrency Bullet Camera

M1221-Q
2MP Multi-Algorithm Box Camera

M1241-Q
4MP Multi-Algorithm Box Camera

M1281-Q 4K
8MP Multi-Algorithm Box Camera

M2221-QL
2MP Multi-Algorithm Bullet Camera

M2241-QL
4MP Multi-Algorithm Bullet Camera

M2281-QL 4K
8MP Multi-Algorithm Bullet Camera

Vehicle Data Structuring Camera

X1221-V
2MP Vehicle Recognition Box Camera

X1281-V 4K
4K Vehicle Recognition Box Camera

X2221-VI
2MP Vehicle Recongnition IR Bullet Camera

X2221-VL
2MP Vehicle Recognition Softlight Bullet Camera

X2381-VG 4K
4K Vehicle Recognition Full spectrum All-in-one Camera

M2120-EVL(7-35mm) NEW
2MP Vehicle Recognition Bullet Camera

M2121-EVL(2.8-12mm) NEW
2MP Vehicle Recognition Bullet Camera

M2121-EVL(8-32mm) NEW
2MP Vehicle Recognition Bullet Camera

M2121-EVL-Sf(2.8-12mm) NEW
2MP Vehicle Recognition Bullet Camera

M2140-EVL(7-35mm) NEW
4MP Vehicle Recognition Bullet Camera

M2141-EVL(2.8-12mm) NEW
4MP Vehicle Recognition Bullet Camera

Integrated ITS Camera

X2331-CPI
3MP Checkpoint IR All-in-one Camera

M2331-TG
3MP Integrated ITS Camera

M2391-TG
9MP Integrated ITS Camera

Security Situation Awareness Camera

X2221-I
2MP Ultra-Low Light IR Bullet Camera

X3221-I
2MP Ultra-Low Light IR Fixed Dome Camera

X6621-Z30
2MP 30x Low Light PTZ Dome Camera

X6721-GZ37
2MP 37x Ultra-Low Light IR PTZ Dome Camera

X6721-Z37
2MP 37x Ultra-Low Light IR PTZ Dome Camera

X6781-Z37 4K
4K 37x Low Light IR PTZ Dome Camera

X6921-Z48
2MP 48x Low Light Laser PTZ Dome Camera

X6981-Z20 4K
4K 20x Ultra-Low Light IR PTZ Dome Camera

M1220
2MP Ultra-Low Light Box Camera

M2140-EBI(3.6/6mm) NEW
4MP Behavior Analysis Bullet Camera

M2220-I
2MP Ultra-Low Light IR Bullet Camera

M2220-In
2MP Ultra-Low Light Invisible IR Bullet Camera

M2220-I(8-32mm)
2MP Ultra-Low Light IR Bullet Camera

M2280-I 4K
4K Low Light IR Bullet Camera

M6721-E-Z31 NEW
2MP Multi-Algorithm PTZ Dome Camera

M6721-Z31
2MP Multi-Algorithm PTZ Dome Camera

M6721-InFbZ23
2MP 23x Ultra-Low Light Invisible IR PTZ Dome Camera

M6741-E-Z37 NEW
4MP Multi-Algorithm PTZ Dome Camera

M8542-EL-Z31 NEW
4MP Smart Tracking System

M8544-EL-Z37 NEW
4MP Smart Tracking System

C2120-I
2MP Starlight Infrared Bullet Camera

C2120-I-Sf
2MP Starlight Infrared Bullet Camera

C2120-I(3.6/6mm)
2MP Starlight Infrared Bullet Camera

C2120-I-P(3.6/6mm)
2MP Starlight Infrared Bullet Camera

C2121-I
2MP Super Starlight Infrared Bullet Camera

C2121-I-Sf
2MP Super Starlight Infrared Bullet Camera

C2141-I
4MP Super Starlight Infrared Bullet Camera

C2150-I
5MP Starlight Infrared Bullet Camera

C2150-I(3.6/6mm)
2MP Starlight Infrared Bullet Camera

C2150-I-P(3.6/6mm)
5MP Starlight Infrared Bullet Camera

C3020-I-P(2.8/3.6/6mm)
2MP Starlight Infrared Fixed Dome Camera

C3020-I(2.8/3.6mm)
2MP Starlight Infrared Fixed Dome Camera

C3050-I(2.8/3.6mm)
5MP Starlight Infrared Fixed Dome Camera

C3050-I-P(2.8/3.6/6mm)
2MP Starlight Infrared Fixed Dome Camera

C6620-Z23
2MP Starlight Infrared PTZ Dome Camera

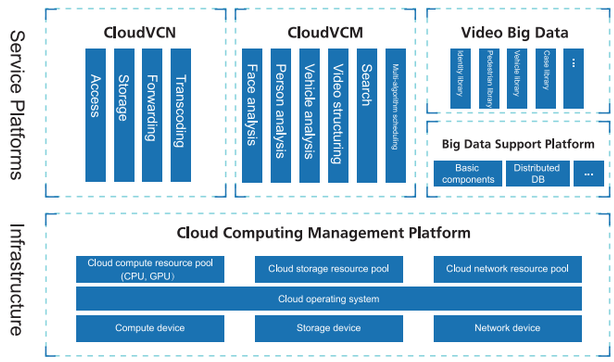
C6620-Z23-Sf
2MP Starlight Infrared PTZ Dome Camera

C6620-Z33
2MP Starlight Infrared PTZ Dome Camera

C6650-Z33
5MP Starlight Infrared PTZ Dome Camera

HoloSens IVS

Huawei HoloSens IVS is based on cloud architecture where software is decoupled from hardware and data is decoupled from applications. It uses a variety of mission-critical technologies, such as cloud computing, cloud storage, and big data to provide full-stack, all-cloud collaboration capabilities. Huawei HoloSens IVS can be used in Safe City projects and during situations requiring surveillance. This solution uses distributed cloud computing, high-performance big data, and intelligent analysis technologies to provide a high-density resource pool featuring elastic scaling. Huawei HoloSens IVS uses algorithm repository service to integrate third-party face-, vehicle-, and person-related algorithms, as well as reverse image search algorithms. Faster analysis is achieved through cooperation between software and hardware, which actively searches through hundreds of billions of data records within seconds. In addition, multiple platforms can collaborate to provide more efficient services. HoloSens IVS uses intelligent insight to help create safer cities.



CloudIVS 9000

Huawei CloudIVS 9000 provides large-capacity and high-concurrency video access, storage, forwarding, analysis, and searching capabilities. It is perfect for medium- and large-sized Safe City projects. As the intelligent center of the entire network, Huawei CloudIVS 9000 processes complex, multi-dimensional, and cross-domain services. It aggregates and shares video resources from provincial and city offices, assisting the command center in cross-city collaboration.

CloudVCN

Provides functions such as real-time surveillance, forwarding, video recording, backup, security alarm, intelligent analysis, voice intercom, and voice broadcast.

CloudVCM

Provides functions such as video analysis and data search.

Edge Cloud

Huawei IVS edge solution provides more efficient storage, analysis, and search capabilities. It also supports medium- and small-sized service coverage, regional autonomy, and fast service deployment in city offices, district/county branches, and campuses.

HoloSens IVS3800

The 1st Intelligent Video Surveillance Powered by "Kunpeng + Ascend"

Innovation: On-demand combination of storage, computing and retrieval
Intelligence: Three-fold increase of analysis performance
Openness: Multi-algorithm rollout in one week

CloudIVS 3000

Lightweight: Only one server is required to provide services
Elastic: Features on-demand definition and simple scaling
Swift: Computes on edge nodes and local services
Smart: Decoupled algorithms help the application development process

CloudIVS 3000S
Storage Cloud Node
Video and image access, storage, and forwarding

CloudIVS 3000C
Computing Cloud Node
Video synopsis, video search, and license plate recognition

CloudIVS 3000R
Search Cloud Node
Facial, personal, license plate, and vehicle feature search

CloudIVS 3000SC
Storage and Computing Cloud Node
Video and image access, storage, forwarding, and structuring

CloudIVS 3000CR
Computing and Search Cloud Node
Facial and vehicle recognition and feature search

CloudIVS 3000SCR
Storage, Computing, and Search Cloud Node
Video and image access, storage, and forwarding, video structuring, and feature search

Video Content Node

Huawei VCN is applicable for small-sized campuses, communities, and intelligent power distribution rooms.It supports a wide assortment of functions such as live video surveillance, video forwarding, video search, video playback, PTZ control, local video viewing,and alarm linkage.

Secure
- N+0 cluster
- SafeVideo+

Open
- Supports 300+ brands of cameras
- Supports connections to surveillance platforms of 50+ brands.
- Allows the eSDK to integrate partners' video surveillance capabilities.

VCN510-8
8 channels

VCN510-8P
8 channels,
PoE power supply

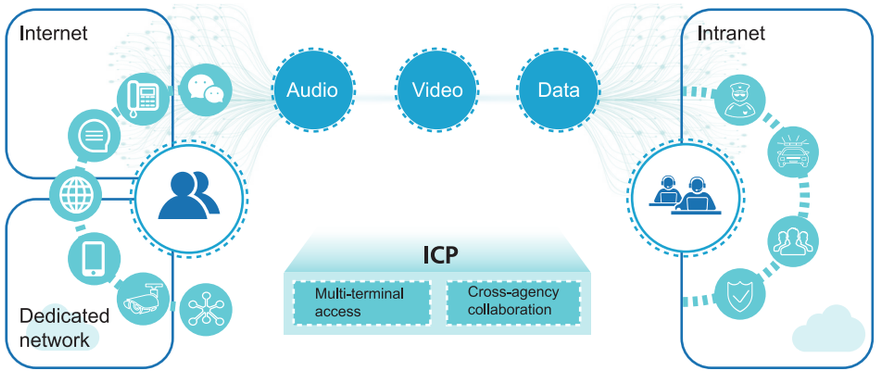
VCN510-16
16 channels

VCN510-16P
16 channels,
PoE power supply

VCN520-32
32 channels

VCN540-64
64 channels

ICP



Huawei Intelligent Command Platform (ICP) solution is designed for Smart City and Safe City projects. It integrates audio and video data to assist command and dispatch personnel in responding more efficiently to emergency incidents. The ICP solution provides cities with resources including multi-channel incident answering, single map-based dispatch, and full-process visualization. These resources can be used to facilitate cross-system communication and improve intelligent command efficiency.

Components

Multi-channel Incident Answering

The public-safety answering service arranges incidents reported using different channels into a single queue, improving the reception efficiency and providing all-round security. Supported channels include voice calls, app, email, SMS message, one-click police calling, and intelligent sensors.

Converged Dispatch

The dispatch command control center connects to various communication systems, including narrowband trunking, broadband wireless trunking, public network phones, VoIP phones, mobile phones, and conference systems. Dispatchers can respond to incidents received from these different communication systems using the same terminal, significantly improving dispatchers' communication efficiency.

Visualized Conferencing

Huawei' s conference module provides the only convergent video conference solution in the industry. It uses converged and on-demand visualized conferencing capabilities, providing means for onsite personnel, supervisors, experts, and dispatchers to communicate and hold conferences more efficiently.

Video Wall

Huawei' s video wall module can display video from various selected video sources, including video surveillance, broadband trunking, and video conference systems. It allows dispatchers to view live video on-demand, and more successfully resolve emergency incidents.

Partner Applications

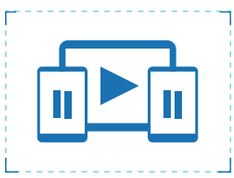
CAD

The Computer-Assisted Dispatch (CAD) system helps implement collaborative command at the service level. The CAD aggregates various resources, helping achieve unified incident responding and emergency command, as well as support interdepartmental decision-making.

GIS

The Geographic Information System (GIS) collects, stores, manages, analyzes, and computes geographic data in a unified manner. It also visualizes various resources on the same display, providing clearer information for incident respondents.

Recording System



The recording system produces incident audio recordings, which can be retrieved for response follow-up. The system centrally configures, manages, and maintains recordings, and uses industry-standard algorithms to ensure file security.

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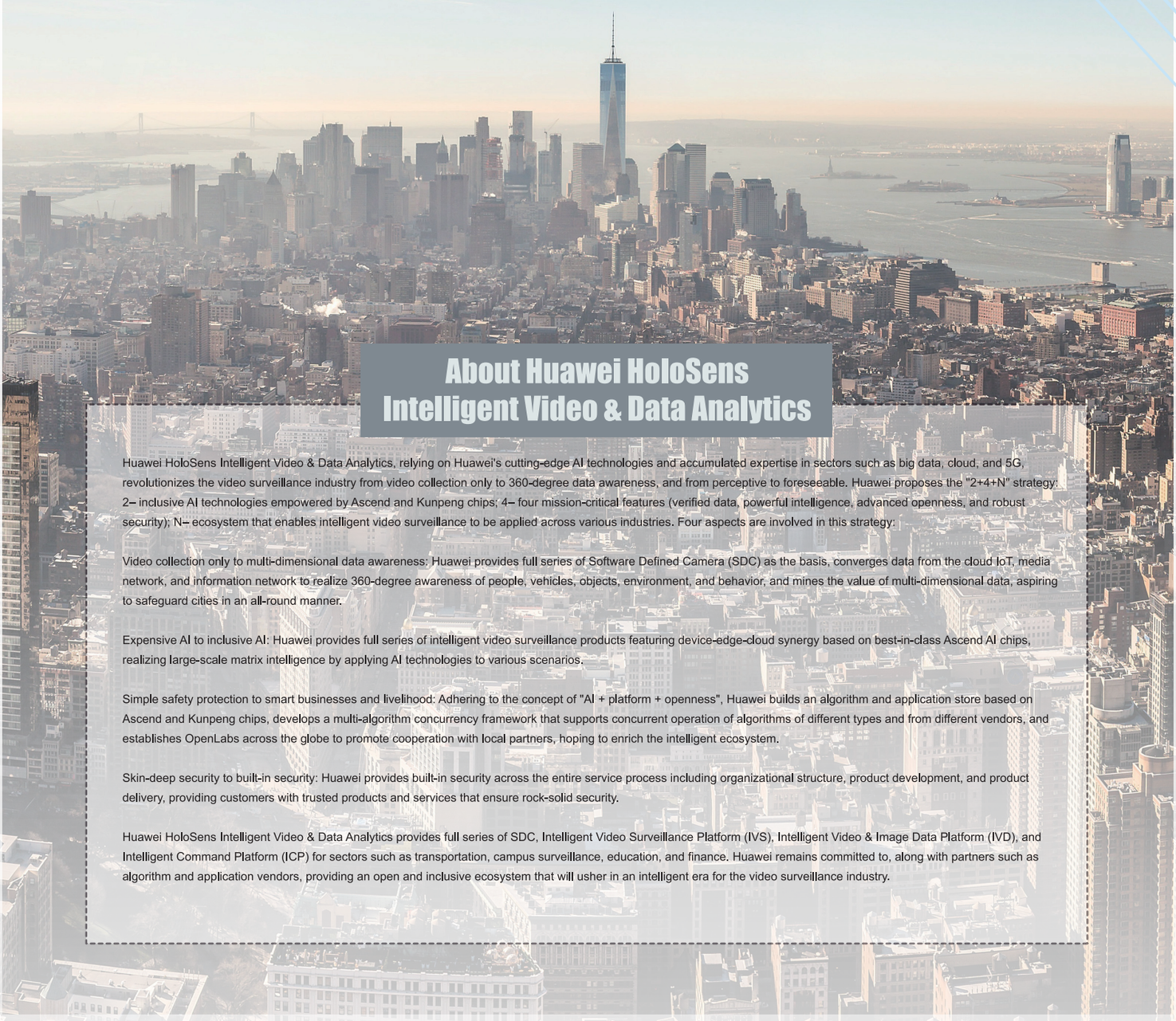

About Huawei HoloSens Intelligent Video & Data Analytics

Huawei HoloSens Intelligent Video & Data Analytics, relying on Huawei's cutting-edge AI technologies and accumulated expertise in sectors such as big data, cloud, and 5G, revolutionizes the video surveillance industry from video collection only to 360-degree data awareness, and from perceptive to foreseeable. Huawei proposes the "2+4+N" strategy: 2– inclusive AI technologies empowered by Ascend and Kunpeng chips; 4– four mission-critical features (verified data, powerful intelligence, advanced openness, and robust security); N– ecosystem that enables intelligent video surveillance to be applied across various industries. Four aspects are involved in this strategy:

Video collection only to multi-dimensional data awareness: Huawei provides full series of Software Defined Camera (SDC) as the basis, converges data from the cloud IoT, media network, and information network to realize 360-degree awareness of people, vehicles, objects, environment, and behavior, and mines the value of multi-dimensional data, aspiring to safeguard cities in an all-round manner.

Expensive AI to inclusive AI: Huawei provides full series of intelligent video surveillance products featuring device-edge-cloud synergy based on best-in-class Ascend AI chips, realizing large-scale matrix intelligence by applying AI technologies to various scenarios.

Simple safety protection to smart businesses and livelihood: Adhering to the concept of "AI + platform + openness", Huawei builds an algorithm and application store based on Ascend and Kunpeng chips, develops a multi-algorithm concurrency framework that supports concurrent operation of algorithms of different types and from different vendors, and establishes OpenLabs across the globe to promote cooperation with local partners, hoping to enrich the intelligent ecosystem.

Skin-deep security to built-in security: Huawei provides built-in security across the entire service process including organizational structure, product development, and product delivery, providing customers with trusted products and services that ensure rock-solid security.

Huawei HoloSens Intelligent Video & Data Analytics provides full series of SDC, Intelligent Video Surveillance Platform (IVS), Intelligent Video & Image Data Platform (IVD), and Intelligent Command Platform (ICP) for sectors such as transportation, campus surveillance, education, and finance. Huawei remains committed to, along with partners such as algorithm and application vendors, providing an open and inclusive ecosystem that will usher in an intelligent era for the video surveillance industry.