Huawei Atlas 500 AI Edge Station

As edge computing gradually advances to intelligent computing, AI computing power at the edge is a basic customer demand.

The Huawei Atlas 500 AI edge station is an intelligent computing product built for edge applications. It features powerful computing performance, small form factor, strong environmental adaptability, easy maintenance, and cloud-edge collaboration. It is designed for security, transportation, community, campus, shopping malls, and supermarkets.

Intelligent Edge
- State-of-the-art product with AI processing capabilities
- Fan-free and stable at –40°C to +70°C outdoors

Huge Capacity in Compact Size
- Processes 16 HD channels in the size of a set-top-box (STB)
- Supports 16 Tera Operations Per Second (TOPS) of INT8

Cloud-Edge Collaboration
- Supports Wi-Fi and LTE
- Works with private and public clouds, receiving applications and algorithms pushed from the cloud
- Unified device management and firmware update on the cloud

Application Scenarios

Safe City
Facial recognition
License plate recognition

Smart Transportation
Traffic light optimization
Intelligent traffic diversion

Smart Community
Resident identification
Visitor identification

Environment Monitoring
Pollution detection

Smart Manufacturing
Intelligent quality inspection
Flexible manufacturing

Smart Care
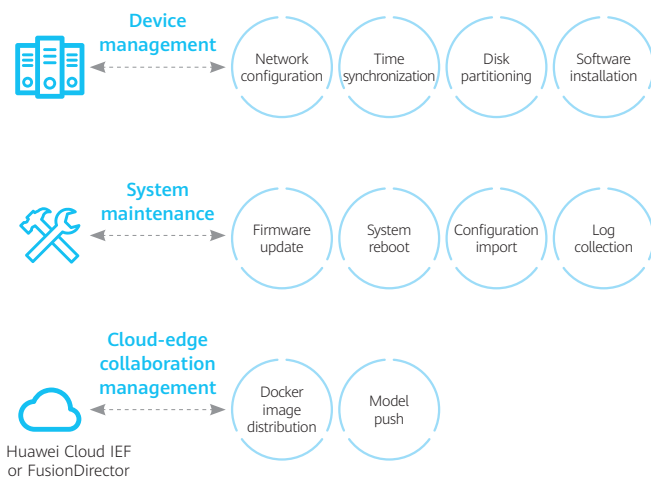Kindergartens and nursing homes

Unattended Retail
Smart vending machines
Smart stores
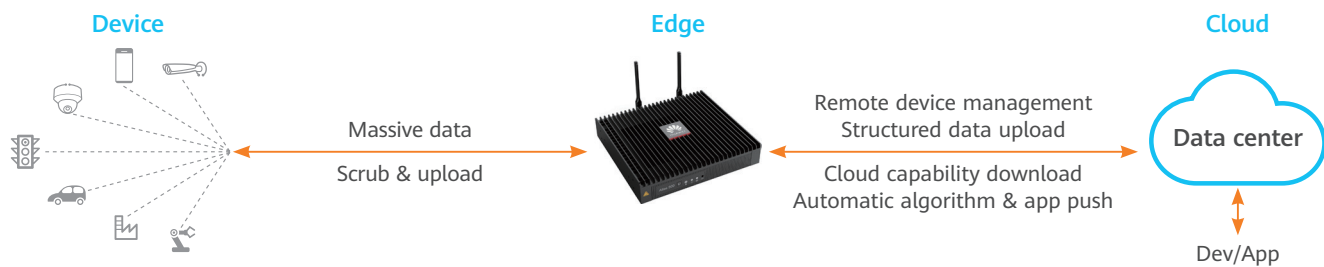
Smart Building
Attendance and security

Atlas Intelligent Edge System (IES)

Device management — Network configuration | Time synchronization | Disk partitioning | Software installation

System maintenance — Firmware update | System reboot | Configuration import | Log collection

Cloud-edge collaboration management — Docker image distribution | Model push

Huawei Cloud IEF or FusionDirector

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Cloud-Edge Collaboration

Device   **Edge**   **Cloud**

Massive data

Scrub & upload

Remote device management
Structured data upload

Cloud capability download
Automatic algorithm & app push

Data center

Dev/App

Atlas 500 Exterior Appearance

AI

Form factor 1:
no disk
45 x 235 x 220 mm

AI

Form factor 2:
with disk
45 x 355 x 220 mm
Expandable:
1 x 3.5" HDD

AI

Both support
MicroSDs
& M.2 SSDs

Specifications

Processor	HiSilicon Hi3559A processor
AI chip	Built-in Atlas 200 AI accelerator module: 16 TOPS of INT8 and 8 TFLOPS FP16 computing power
DIMM	For the processor: 4 GB DDR4, 64-bit, 2400 Mbps For the AI accelerator module: 8 GB/4 GB LPDDR4x, 128-bit, 3200 Mbps
Hardware encoding/ decoding	H.264/H.265/MJPEG/JPEG/PNG*
Security algorithms	AES/DES/3DES encryption and decryption, RSA signature verification, and HASH anti-tampering
Storage	Onboard 32 GB eMMC (for operating system) 1 MicroSD slot and 1 M.2 SSD port Optional: 1 x 3.5" 6 TB/12 TB HDD
Network	2 RJ45 GE ports 1 SIM card slot Optional: 3G/4G wireless module
Other I/O	1 HDMI interface, 1 pair of 3.5 mm stereo input and output interfaces, 2 external and 1 internal USB 2.0 ports (Type-A)
Power supply	12 V DC, with external power adapter
Protection rating	IP40
System management	One-click firmware update, automatic hardware fault detection, autonomous management, and cloud-edge collaboration Web login Interconnects with Huawei Cloud Intelligent EdgeFabric (IEF) Interconnects with Huawei FusionDirector management platform
Dimensions (HxWxD)	No disk: 45 mm x 235 mm x 220 mm With disk: 45 mm x 355 mm x 220 mm
Weight	No disk: 2.5 kg With disk: 4.7 kg
Operating temperature	No disk: -40°C to +70°C With disk: -40°C to +60°C
Typical power consumption	No disk: 25 W With disk: 40 W

*For detailed hardware encoding/decoding specifications, see the *Huawei Atlas 500 Technical White Paper*.