

Rontex Technology Company Profile

Shenzhen Rontex Technology Co., Ltd (aka Genew Intelligent)

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- 02 Solution Introduction
- 03 Application Cases

About Us

Company Overview



Shenzhen Rontex Technology Co.,Ltd is a fast-growing AIoT solution and product provider committed to offering the value-added services and cutting-edge technologies.

Rontex Technology dedicates its value proposition into AIoT industries, featuring **Internet of Things - IoT** communication, and **Artificial Intelligence - AI** technologies as its core. Through a worldwide network of distributors, Rontex Technology disseminates its products and services in comprehensive solutions with a hope to connect physical and digital worlds together to elevate **AIoT intelligence** to the next level.

"To empower Internet of Things and Artificial Intelligent innovation with reliable products and trusted services."

Founding Team



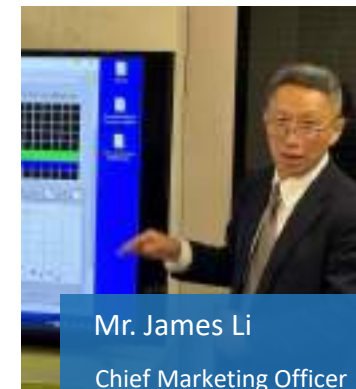
Dr. Rocwill Lee
Chairman & CEO



Mr. Andy Liu
Chief Technology Officer
Imperial College London, Master



Mr. Wang Xin Long
Chief Product & Solution Officer



Mr. James Li
Chief Marketing Officer
Yamagata University, Master



Mr Bing Long Huang
Chief Manufacturing &
Operation Officer

Company Overview



- Establishment date: February 8th, 2018
- October 2021, Genew Technology (code: 688418) strategically invested and held a controlling stake
- Registered address: 17th floor, Phase II, Liuchuangyuan, Yuehai Street, Nanshan
- Core business: Based on "AIoT" technology and products to empower intelligent application scenarios;
- Processing plants: Shenzhen Guangming Branch, Anhui Huaibei Branch
- Subsidiary: Shandong Genew Intelligent Technology Co., Ltd, Genew Intelligent Fujian Branch

Enterprise Qualifications

High-Tech Enterprises

Technology-based SMEs

Innovative SMEs

"Little Giant" Enterprise

Dual Software-Certificated Enterprise

Professional Contracting Certificate for Electronic and Intelligent Engineering

Professional Contracting Certificate for Fire Protection Facilities Engineering

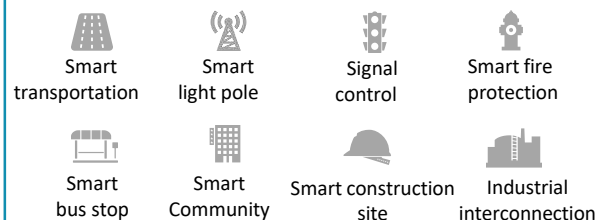
Safety Production License

Right to operate import and export goods

ISO9001 ISO14001 ISO45001



10+ Industry applications



70+ technical protection

- 13 invention patents
- 11 utility model patents
- 19 software copyrights
- 28 design patents

5+ standard formulation participation

- National standard "Technical requirements for high-performance computing system"
- National standard "Application of Technology Biometric Recognition in Video Surveillance System"
- Local standard "Security Management Specification for Multi functional Intelligent Pole System"
-

4+ University collaboration

- Shenzhen University
- South China University of Technology
- Guangzhou University of Technology
- Anhui University
- Tianjin University School of Emergency Medicine



Global Competition



“Rontex Technology Awards Global Top 3”

Intel® Grand Challenge:
Global Edge AI Solutions Competition

"Congratulations to Rontex Technology! This solution stands out as one of our Top 3 highlights of the year. Rontex Technology is a fast-growing AIoT solutions and product provider, specializing in IoT and AI applications. Their commitment to advancing AI across industries, particularly in smart transportation and infrastructure, is accelerating the deployment of intelligent edge solutions in various sectors.

Rontex Technology is leveraging its expertise to develop smart urban transportation solutions, including edge computing-based smart road infrastructure and sensor networks integrated with 5G communication. Their strategy involves deploying intelligent edge computing road units supporting direct communication, upgrading traffic signals with network connectivity, and integrating with city-level platforms to build the next-generation national traffic control network."

— Renu Navale, VP & GM of Cities & Critical Infrastructure Division, Intel Edge Computing Group

<https://intel.com/IESC>

Brand Partners



On February 2, 2024, we launched the **ROT X** brand in **Shenzhen, China**, focusing on **smart elderly care** and wellness. With a vision of "**Wisdom for Good, Technology for Well-being**," Rontex Technology drives innovation in this sector, serving both domestic and international markets.

"Wisdom for Good, Technology for Well-being"



We launched the **KOAi brand** in **Hong Kong, the US, and Germany**, embodying the philosophy of "**Innovation Beyond Imagination**." KOAi offers next-gen smart hardware, including **smart cameras, pet care, and baby care consumer products**, to global consumers. **Wuufi** is the child brand of Koai for Pet Care consumer product.

"Innovation Beyond Imagination"



Visit website: <https://koai.us/>

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Data is distributed

Scattered across various locations and scenarios.



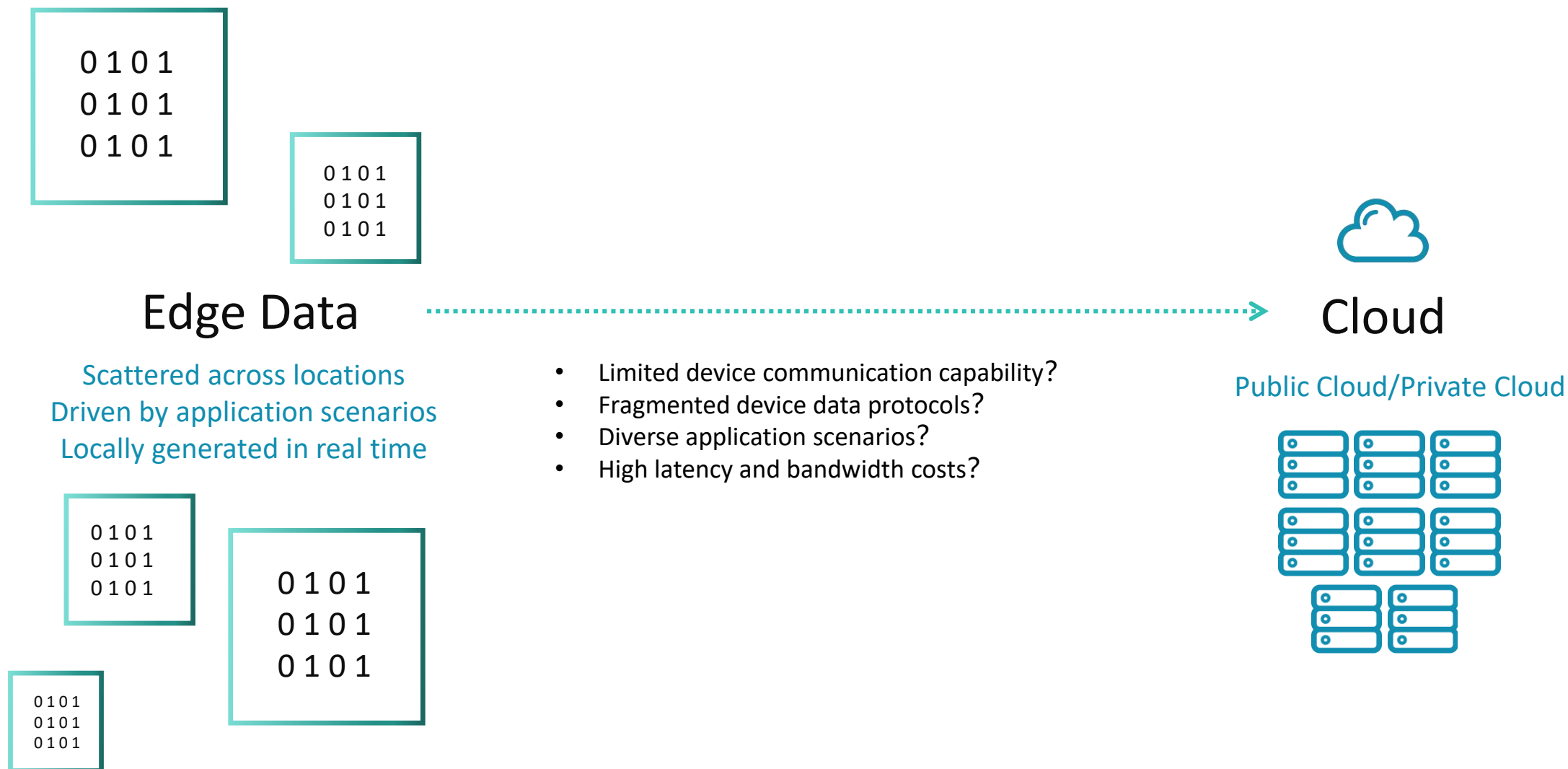
Data cannot be transferred

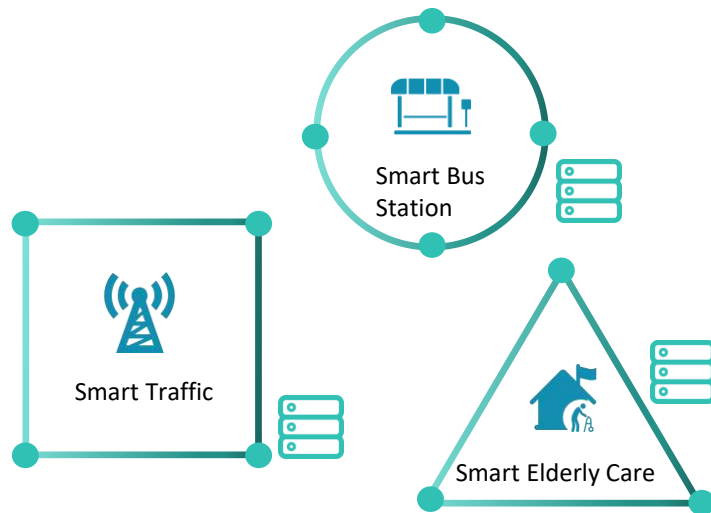
Restricted by privacy and regulatory compliance.



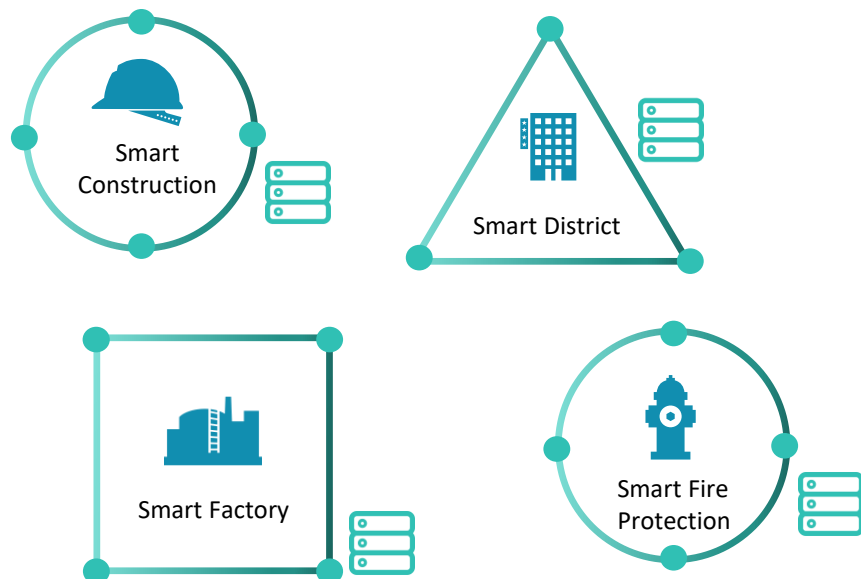
Data requires real-time processing

To meet application demands and efficiency.





Edge Data



AI+IoT at the edge source

- ✓ Enabling intelligent computing and communication fusion
- ✓ Edge-side intelligence and automation
- ✓ Achieving fast decision-making and response.



Cloud

Public Cloud/Private Cloud



The Challenge: Unlocking Value in Intelligent Infrastructure

Key Pain Points

Sensor Fragmentation

- Incompatible devices & protocols → Data silos, integration complexity

Data Overload

- Real-time video & sensor streams overwhelm centralized systems

Latency & Bandwidth Constraints

- Raw data transfer causes delays & high costs → Hurts real-time responsiveness

Limited Local Intelligence

- Endpoints often lack on-site AI → Too much reliance on remote processing

Scaling Difficulties

- Rigid systems struggle to integrate new sensors & AI models

Complex Interfaces for Insights

- Users face difficulty accessing real-time device/alarm/report data

Collaborative AI Architecture

Distributed Processing

- ✓ Run AI workloads where they're most efficient — edge or core

Faster Decision-Making

- ✓ Local processing reduces latency in time-critical use cases

Optimized Bandwidth & Cost

- ✓ Pre-processed data reduces unnecessary cloud traffic

Flexible, Scalable Design

- ✓ Modular architecture supports both edge nodes and server racks

Natural Language Interfaces

- ✓ AI assistants offer intuitive access to device status, alarms, and auto-generated reports

“A scalable foundation for future AI-driven applications”

Solution Architecture

Rontex Applications

Urban Management

Emergency Command

Industrial Vision

Video Security

Traffic Management

Smart Companion

Rontex Management Platform

AI Models

Domain Knowledge

Compute

Storage



Comprehensive Server

Network

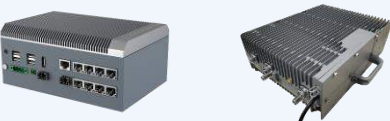
Security

IoT

Unified Comms

Rontex Products Matrix

Edge AI Agent (toB / toG)



Edge Fusion Gateway

Cloud AI Agent (toB / toG)



AI Training & Inference Server

Terminal AI Agent (toB / toG)



Smart Inspection



Solar Robot



Radar Vision Unit



Smart Helmet

Terminal AI Agent (toC)



Low-power AI Cam



Baby Cam



Fall-detect Radar



Vital Sign Radar

RockOS AIOT OS

Multimodal AI

Edge Inference

Local Knowledge

Protocol Parser

Stream Service

Data Interaction

Multi-Modal Perception

Data Types

Video Stream

Audio Stream

Radar Stream

Modbus Data

Perception Capabilities

Visual Understanding

Anomaly Detection

Point Cloud Analysis

Time-Series Analysis

Agent-Driven
Control Chain

Agile Control

Control Types

PLC Control

Modbus RTU

Modbus TCP/IP

DO/AO

Ethernet / IP

WSN Wireless

BluetoothControl

LTE Voice Call

Semantic
Rule Reasoning

NLP Interface

Interaction Capabilities

NL Dialogue

Local QA

Private Knowledge

Language-to-Action

Business Functions

Device Dialogue

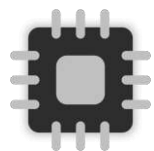
Voice-Guided Tasks

Report Generation

Rule Engine

Main-stream Conventional Sensors and Dispatch Equipments

RockOS - Multi-Modal Perception



Multi-Modal Perception

 Rich interfaces and communication resources

 Analysis of data protocols

 Equipment status monitoring

 Real time remote control operation

 Remote troubleshooting and recovery

 Data security and privacy protection



Edge Intelligent gateway



Edge Inference Server

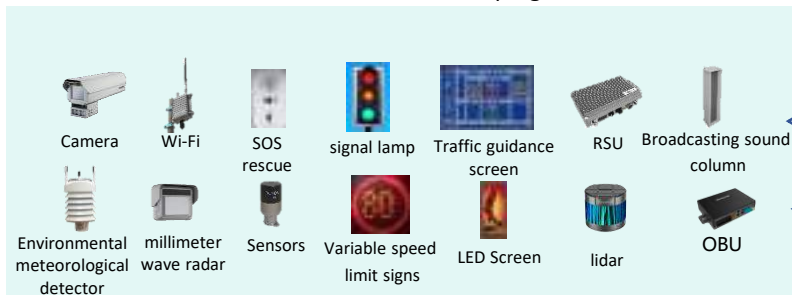


Fusion AI Training and Inference Server

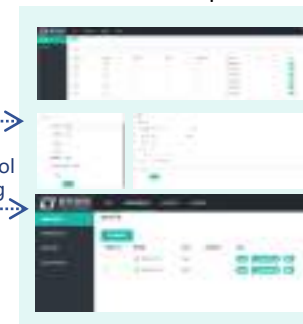
Demand	Moderate computing power for AI inference	High computing power for AI inference	High computing power for AI inference and model training
Computing	12-36 video streams and AI inference	40-50 video streams * < 6 AI model inference	100-120 video streams * 6-10 AI model inference
Deployment	Roadside edge	Roadside edge / Central Server rack	Central Server rack
OS	RockOS	RockOS	RockOS
Platform	AIoT Platform	AIoT Platform	AIoT Platform

RockOS Edge Protocol Analysis

80+ mainstream manufacturers of plug and use devices



Web page configuration + remote updates



Unification and standardization
Cloud Protocol Interaction

MQTT
TCP
UDP
HTTP

AIoT Platform



RockOS - AI Capabilities



AI Capabilities



Selection of AI Algorithm Application Library



Model inference acceleration



Model evaluation and fine-tuned



Edge - Cloud AI Collaboration



One-shot/Few-shots AI Capabilities



Intelligent alerts and data visualization

60+ RockOS Custom AI Application Library



Road hazard identification



Detection of vulnerable traffic participants



Vehicle feature recognition



Action Recognition



Vehicle license plate recognition



Traffic flow statistics



Collaborative AI



Cloud AI fine-tuned and inference

- ❖ Designed for processing batch data (low processing frequency - not realtime streaming)
- ❖ The model is relatively large and requires high computational power
- ❖ Model performance evaluation and fine-tuned



Edge AI responsive inference

- ❖ Processing real-time streaming data on the edge side
- ❖ Model optimization, model compression, and implementation of deep inference acceleration for software and hardware
- ❖ Knowledge transfer and pruning techniques

- ✓ **More Responsive:** Fast processing frequency on field
- ✓ **Less False Alarms:** Large model alerts verification
- ✓ **Model Improvement:** Constant evaluation and finetuned
- ✓ **Faster AI Customerization:** One-shot / Few-shots Capabilities

Platform Visualization



Upload
Structured
Data
Alarm
Content
Alarm
Image
Alarm
Video

Batch
distribution

Application
Binding
Alarm
Rules
Video
Replay



RockOS - Natural Language and Visual Interfaces



Natural Language and Visual Interfaces



Natural Language Dialogue



Multi-modal Input



Private Knowledge Base Management



Device and Site Alarms Dialogue



Reports and Statistics Generation



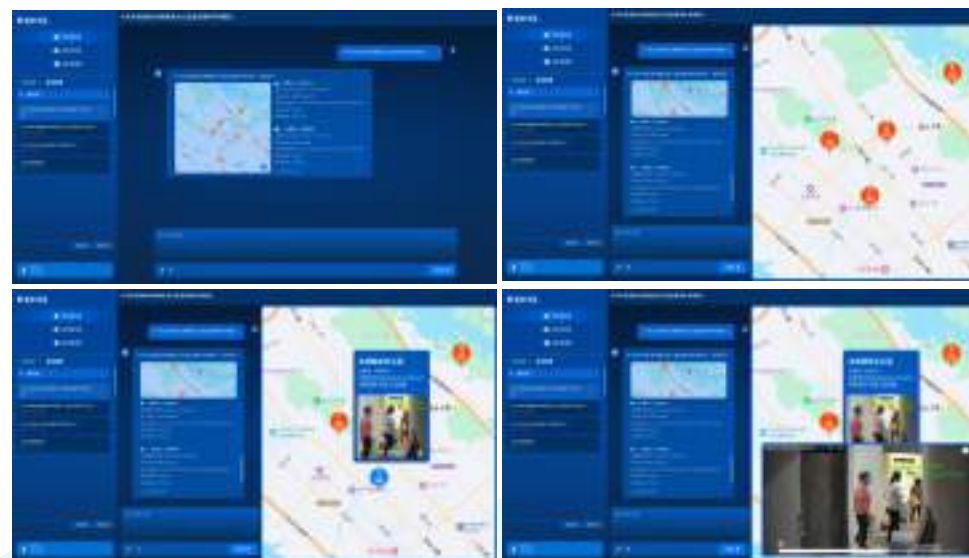
Close Business Loop

Private Domain Knowledge



- ✓ Manage **Local Knowledge Base**
- ✓ Text & Image **Multi-Modal Dialogue**
- ✓ Reliable, **Hallucination-Free** Knowledge Output

Natural Language Dialogue



- ✓ Conversational **Insights into Device and Site Alarms**
- ✓ Natural Language Interaction — **no complex workflows** or **technical barriers**
- ✓ Generate **Lists, Reports, and Stats** via **Simple Dialogue**
- ✓ Close Business Loop — **fast alarm handling** and improved efficiency

MEC: Edge Intelligent Gateway

MEC Product



MEC Summary

An **intelligent edge platform** deployed near data sources to enable **real-time processing** and **local AI inference**.

Core Capabilities

- ✓ Integrated services: Compute, storage, networking, app hosting
- ✓ Powerful edge AI with Intel® Core™ CPUs & Iris® Xe graphics
- ✓ 12–36 real-time video stream AI inferences
- ✓ Rich I/O: RS485, DI/DO, AI ports + wireless modules
- ✓ Wireless connectivity: 4G / 5G / Wi-Fi built-in
- ✓ Interfaces with 80+ mainstream sensors (cameras, radars, etc.)

Built for Intelligent Infrastructure

- ✓ Agile deployment for smart cities & industrial use
- ✓ Local + cloud collaboration for scalable intelligence
- ✓ Privacy & security baked into the edge
- ✓ Real-time insights without cloud latency

Fusion AI Training and Inference Server

Fusion AI Server



Product Summary

The **All-in-One AI Platform**, delivers both **training** & **inference** in **one box** — supports **data collection**, **model retraining**, **real-time inference**, **intelligent alarms**, and **automated response workflows**.

Core Capabilities

- ✓ Handles 60–120 video streams with 6-10 AI models inferencing simultaneously
- ✓ High computing power with 2 Intel® Xeon® CPUs and up to 4× Arc™ GPUs
- ✓ Enabling high-efficiency, low-latency inference
- ✓ Closed-loop AI lifecycle: From edge data → training → deployment → feedback
- ✓ Plug-and-play integration of hardware, software, and AI algorithms
- ✓ Smart automation: Triggers alerts, reports, and work orders based on AI insights

Built for Intelligent Infrastructure

- ✓ Smart Transportation: Vehicle detection, violations, flow analysis
- ✓ Emergency Response: Incident detection, early warnings
- ✓ Parks & Facilities: Crowd monitoring, access control
- ✓ Camera System Upgrades: From passive to intelligent vision

Edge Agentic AI Terminals

Intelligent Inspection All-in-one



Time-Based Task Planning



Multi-Algorithm Task Scheduling



Multi-Viewpoint Coordination

“Smart unit with visual & audio sensing, alerts, and interaction — for intelligent environment management on lamp posts, campuses, communities, and construction sites.”

Solar-powered Inspection Mobile Robot



Portable & Flexible Deployment



Multiple Power Options: Battery, solar, or AC-powered



Rapid Setup: One-person, 15-min deployment for emergencies



Custom AI Onboard: Intelligent analysis with tailored algorithms

Radar-Vision Fusion Unit



- ✓ Real-time vector data: distance, speed, direction, height
- ✓ Accurate classification: pedestrians, bikes, vehicles
- ✓ Fast, precise multi-target perception
- ✓ Covers 12 lanes horizontally
- ✓ <50ms end-to-end latency

“High-end 4D mmWave radar with height detection + AI video sensor.”

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**Smart
Traffic**



**Factory
Energy Saving**



**Smart
Construction**

An aerial photograph of a multi-lane highway with various vehicles including cars, trucks, and a bus. A complex, glowing blue network of lines and nodes is superimposed over the scene, representing a smart traffic management system. The lines connect different points on the road and around the vehicles, suggesting data flow and communication. A dark blue rectangular banner is positioned in the center of the image, containing the text "Smart Traffic Solution" in white.

Smart Traffic Solution

Smart Traffic Solution Architecture

Smart application layer

Traffic Monitoring

Emergency Command

Vehicle Road Collaboration

Key Vehicle Control

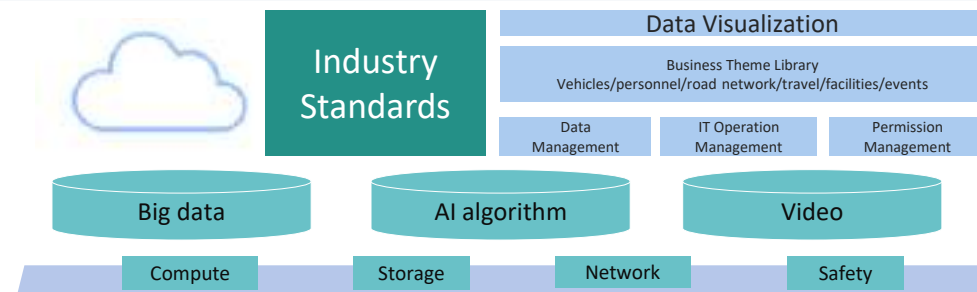
Smart Maintenance

Signal Control

High Precision Map

Cloud control center layer

Business process management
Data visualization display



Comprehensive Server

Access and computing power layer

Edge analysis
Computing power fusion



IoT Data Transfer Unit



Edge Intelligent gateway



Edge Fusion Server



AI Fusion Server
(AI Training & AI Inference)

RockOS OpenVINO

Protocol Translation

Customized AI Algorithm Library

Equipment Parameter

Algorithm Application Pairing

Cloud configuration management

Data security management

Network Security Management

Equipment linkage

Roadside terminal layer

Main device types
Plug and use

Highly integrated and reusable Infrastructure



Multi functional smart pole

Roadside perception equipment



Camera



Lidar



Millimeter wave radar



UAV



Inspection robot
(Smart pole all-in-one machine)



Solar-powered intelligent mobile robot



Environment detection



Displacement sensor



Voice intercom

Information release/control equipment



traffic light



Traffic screen



Multimedia screen



Broadcasting sound column



Variable speed limit

Intelligent Vehicle to Everything (V2X) devices



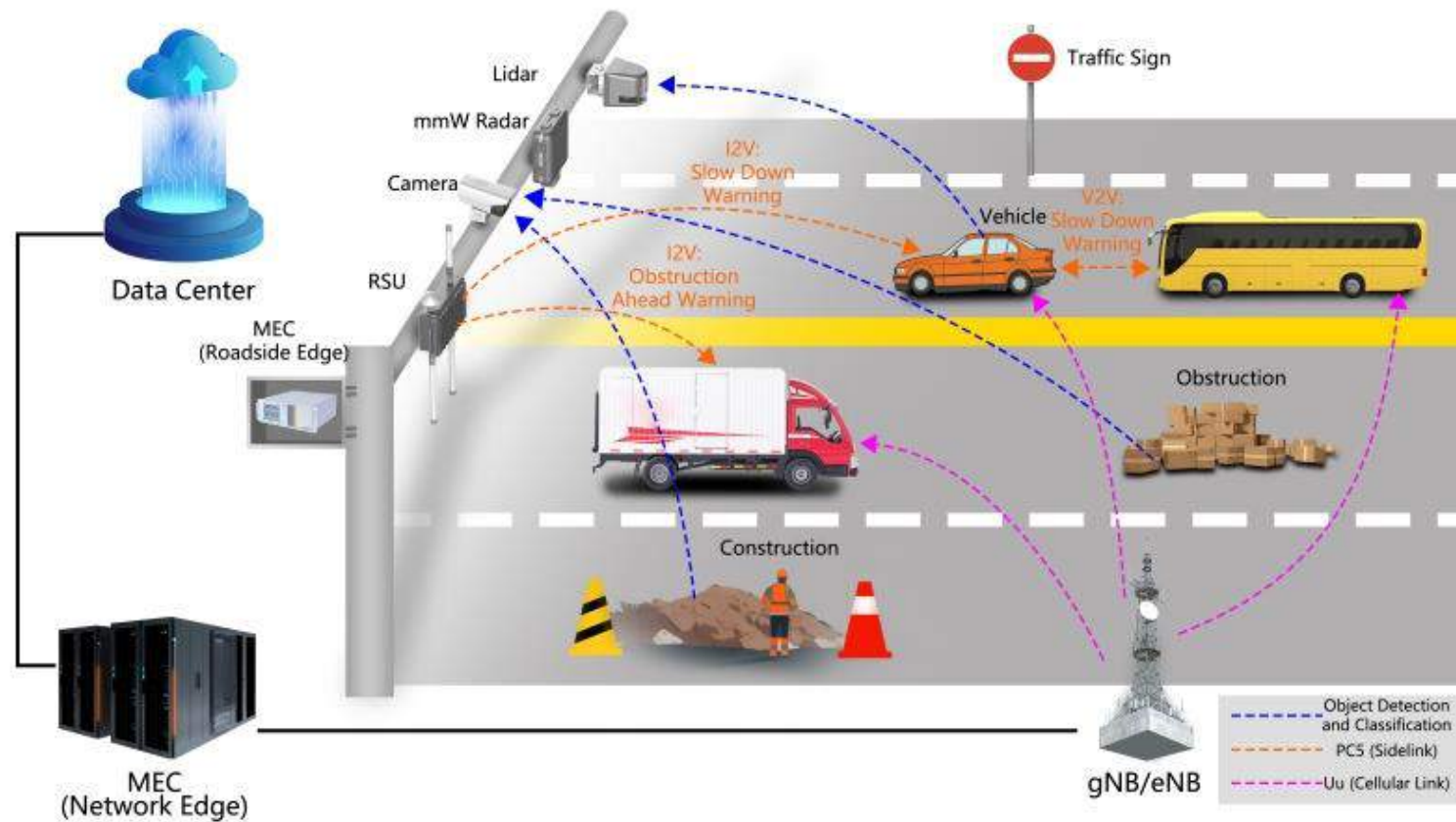
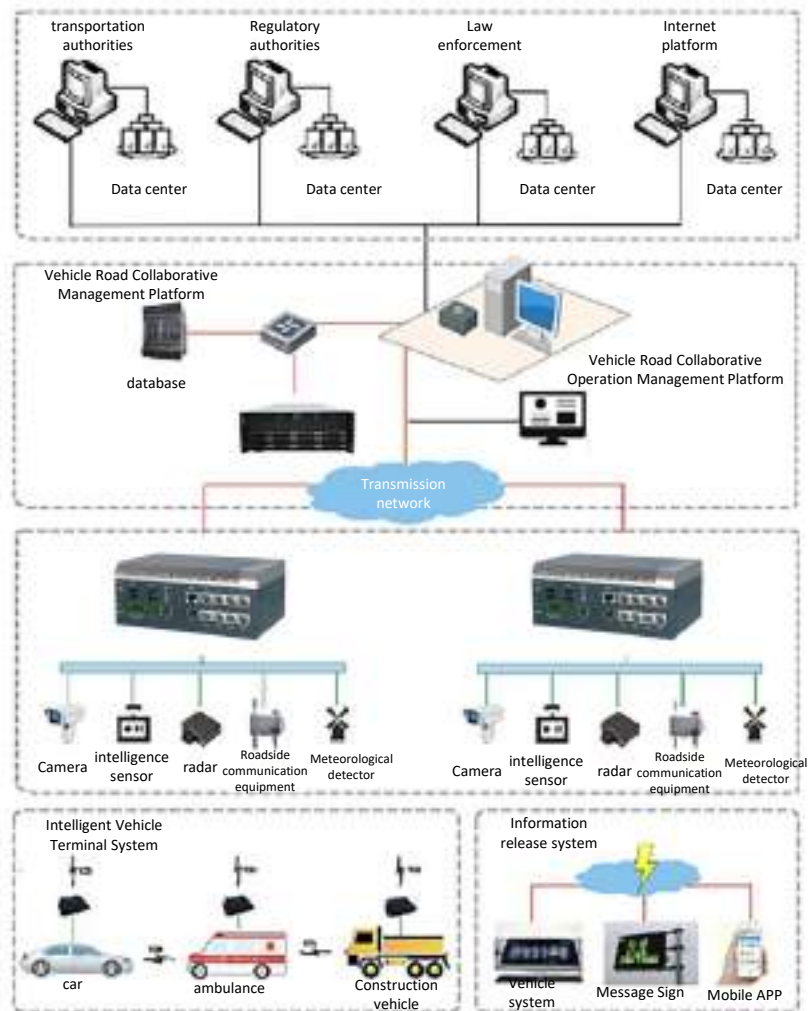
RSU



OBU

Network Topology

Network Topology



Successful Cases of Smart Transportation

Smart Road on Julong Road, Pingshan District, Shenzhen

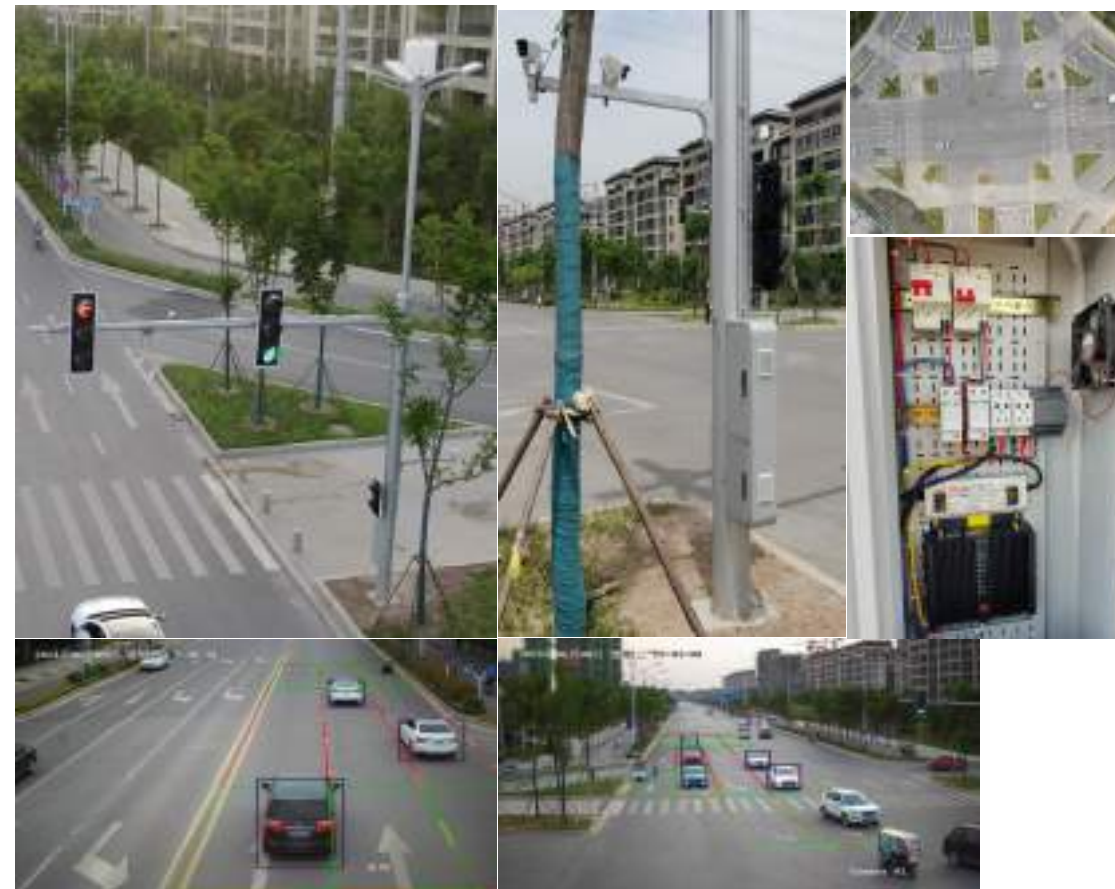


“The first smart road in Pingshan District, Shenzhen, promoting the construction of smart cities and high-quality development of the 5G industry”

The first smart road in Pingshan District, Shenzhen, adopts **multifunctional intelligent light poles** throughout the entire line. This intelligent lamp post not only has a highly technological appearance, but also scientifically **integrates lighting, public security monitoring, traffic lights, 5G base stations**, etc. It not only reduces repeated financial investment and road excavation, but also achieves neatness and unity in the road landscape. At the same time, it **realizes resource sharing, promotes the construction of smart cities and high-quality development of the 5G industry**.

- Smart monitoring
- Signal optimization control
- 5G base station
- Smart lighting
- Smart Meteorology

Huaibei Vehicle and Road Collaborative Pilot Project



By using **highly reusable** slide type multifunctional smart poles, sensor devices or information transmission devices such as **cameras, RSUs, weather stations, traffic lights, broadcasting sound columns, LED screens**, etc. can be mounted. This type of data will be integrated into the edge fusion system located in the multifunctional intelligent pole equipment compartment, and the integrated machine will **use deep learning based computer vision analysis and data fusion technology to accurately perceive objects, events, and states on the road**, generate standard **vehicle road collaborative V2X safety messages**, and then the **roadside unit (RSU)** will remind the driver through the PCS wireless air interface through **the display terminal in the vehicle**.

Successful Cases of Smart Transportation

Intelligent Transportation Project in Anhui



Pain Points and Demands

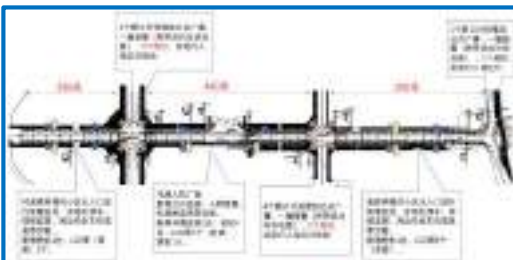
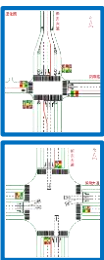
- Citizens are gradually moving in, and the population is skyrocketing;
- High traffic and foot traffic during holidays and festivals;
- Mixed use of motor vehicles and non motor;
- Tight parking spaces;
- Severe congestion at key intersections and main roads;

Signal dynamic optimization control

- Real time traffic situation detection of the entire region;
- Regional adaptive signal optimization based on edge computing;
- A data-driven optimization plan for traffic organization;
- Output traffic evaluation indicators;

AI scenario applications

- Detection and linkage of pedestrians/non motorized vehicles running red lights;
- Detection of vacant parking spaces on the roadside and guidance of parking guidance screens;
- Detection and linkage of illegal parking at the entrance and exit of the community;
- Monitoring and linkage of disorderly stalls in the square;
- Square crowd density monitoring and linkage;



Smart Pole Project in Nanshan District, Shenzhen

Project background

Nanshan District is the research, education, and sports center of Shenzhen, with active economic production and dense population, which poses a more "intelligent" demand for the refinement of urban governance level.

Genew Intelligent provides a professional and comprehensive multifunctional intelligent rod solution for this project. This scheme adopts a modular structure design, which is equipped with intelligent lighting, video monitoring, wireless WIFI, public broadcasting and other modules to achieve various functions such as intelligent lighting, environmental information collection, security and road intelligent monitoring, micro base stations, information dissemination, emergency visual broadcasting, etc.

Construction content

- Pole body subsystem (ordinary pole, 5G base station pole, fire multifunctional pole, water multifunctional pole, interactive screen runway pole)
- Smart lighting subsystem
- Video surveillance subsystem
- Wireless WiFi subsystem
- Public Broadcasting Subsystem
- Information publishing subsystem
- Environmental monitoring subsystem
- Multi functional intelligent pole management platform



Construction significance

- Based on artificial intelligence visual applications, intelligent solutions have been provided for surrounding city management and traffic diversion
- By using low-power and high-efficiency LED light sources instead of traditional high-power and inefficient high-pressure sodium light sources, the energy-saving rate of street lamps can reach over 48%.
- A highly automated and intelligent Internet of Things system will undertake the majority of maintenance and management work for street lighting systems, reducing the daily management tasks of government departments.
- Through a single project construction, various IoT sensing devices in various fields such as security, environmental protection, urban management, and meteorology are organically installed on streetlights to avoid redundant construction of multiple devices and reduce the construction cost, construction cost, and land use cost of urban IoT systems.

Successful Cases of Smart Transportation

Wuhu Yangtze River Bridge Upgrade and Renovation Project



Construction significance

- Control improvement: Optimize traffic organization and increase peak inflow and outflow capacity by 10% -15%.
- Optimize the transportation network.
- Upgrade the travel experience.
- One network unified management and intelligent operation and maintenance

Chengdu Ring Ecological Park Greenway Project



- Interactive screen runway intelligent pole
- Smart lighting subsystem
- Video surveillance subsystem
- Wireless WiFi subsystem
- Public Broadcasting Subsystem
- Information publishing subsystem
- Environmental monitoring subsystem
- Multi functional intelligent pole management platform

Qingdao Smart Community Multi functional Pole Project



Qingdao is an important coastal center city in China, and the construction of a new smart city started earlier. This project, Zhenyou Zhilian, has established a comprehensive intelligent perception system for Qingdao through self-developed products, allowing the city to perceive, think, and evolve, helping Qingdao Laoshan create a new model of community "intelligence".

- AI monitoring
- Smart lighting
- Smart Broadcasting
- Smart LED screen
- Smart Meteorology

Hangzhou Beautiful Countryside

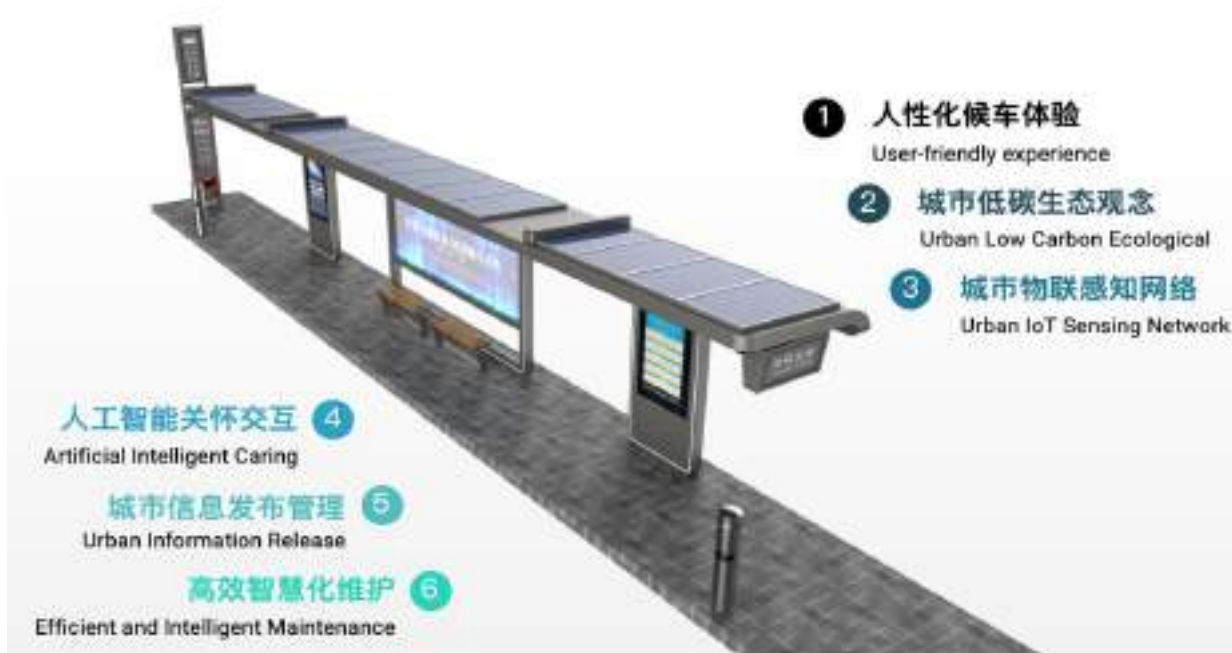


Wuxi Chong'an Temple Pedestrian Street



Successful Cases of Smart Transportation

Shenzhen Transportation Improvement Service (Nanshan Technology Park Pilot)



- Solar energy storage power supply: By combining solar panels and energy storage batteries, sustainable energy supply can be achieved at bus stops.
- AI visual analysis: passenger flow monitoring and security monitoring, waiting order supervision, waiting environment monitoring, etc.
- Forecast Station Screen: Broadcast bus arrival information, including route name, current arrival, arrival time, vehicle congestion, and other information.
- Real time information screen: vehicle route, station, vehicle location, vehicle arrival information, full load rate, and other information.
- Comprehensive information screen: promotional display, surrounding POL information
- Waiting announcement broadcast: broadcasts the route of incoming trains and provides reminders and warnings to passengers who have entered the parking area while waiting.
- Automatic induction fan: provides cold air service in hot weather.



Smart Traffic Management Platform

"Contribute to creating a city-level situation intellisense and operation command center based on edge-cloud integrated computing and multi-sensor integration"



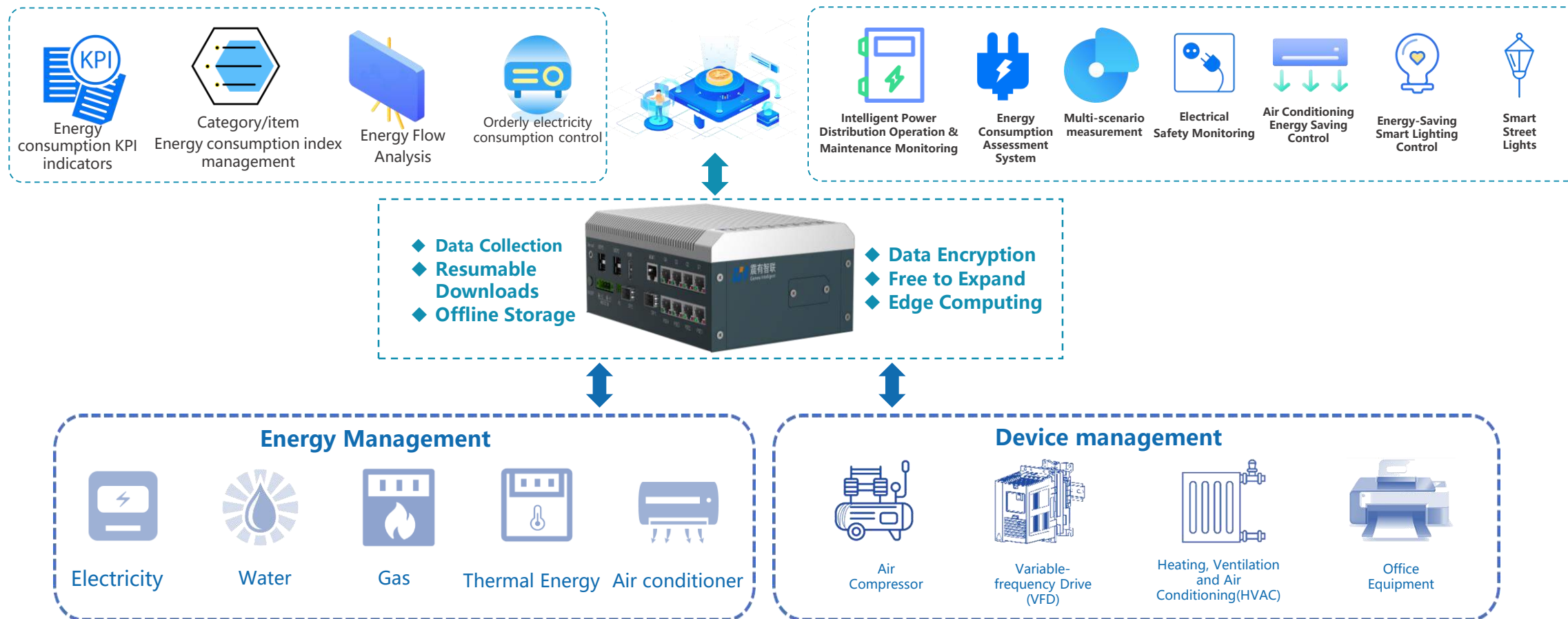


The image depicts a modern industrial setting, likely a manufacturing plant, with a focus on energy efficiency. The scene is dominated by large, complex machinery in shades of blue and yellow. Overlaid on this industrial background are several glowing, semi-transparent digital elements. These include circular gauges and data readouts showing percentages: '+ 80%', '+ 79%', and a prominent '+ 94%' which is also associated with the range '01.-1000'. The overall aesthetic is high-tech and futuristic, with a cool color palette of blues and greys, punctuated by the yellow of the machinery and the bright white of the digital text. The lighting is soft and even, highlighting the metallic surfaces of the equipment.

Factory Energy Saving Solution

Smart Factory Energy Saving Solution

Solution Overview

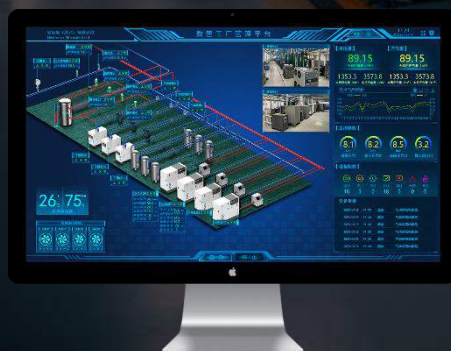


Rontex Technology energy saving solution includes the **metering of energy media** such as **electricity, water, cooling load, heating load, and gas consumption**, as well as the **collection and monitoring of parameters** related to **equipment operation**, such as **water pressure, temperature, current, and voltage**.

The solution integrates functions such as **electricity monitoring, water monitoring, energy consumption analysis, equipment monitoring, energy consumption reporting, alarm management, equipment management, equipment operation and maintenance, information management, and system management** into one platform that can meet different business needs by role-based access.

Smart Factory Energy Saving Solution

- **Data Access:** Real-time industrial device monitoring
- **Health Assessment:** Evaluate device health, cut costs
- **Asset Management:** Prevent theft & misuse, reduce loss



Data Analysis
Fault Prediction

Real-Time Analytics



设备实时接入



物料在线跟踪



流程实时进度



Status Monitoring

Power on/off, temperature, humidity, vibration

Anomaly Detection

Location-based anomaly detection

Health Evaluation

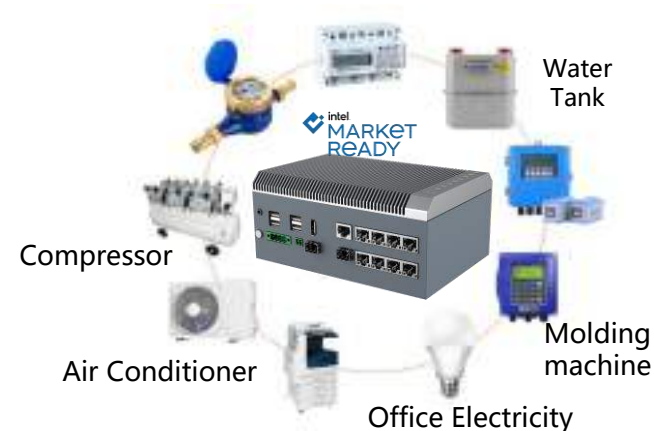
Failure rate
Usage history
Runtime
Quality compliance

Successful Case of Factory Energy Saving Solution



Smart Upgrade for Unattended Equipment Rooms

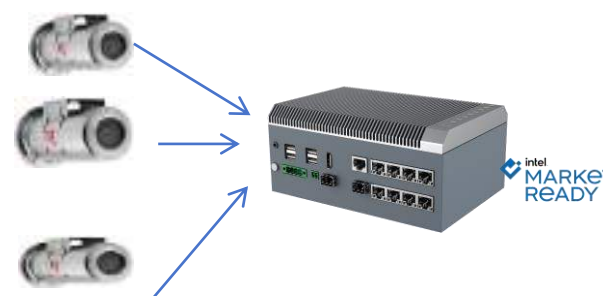
Ryder Electronics partnered with leading AIoT provider RonTex Technology to implement an intelligent control system for unattended equipment station rooms. The project aims to enable automated monitoring and control through advanced IoT and AI technologies.



Multi-parameter collaborative adjustment, capturing system changes, quick response, accurate execution, autonomous parameter tuning, and continuous energy optimization.

Smart control: Pressure control Fault backup Multi-scenario flow modes

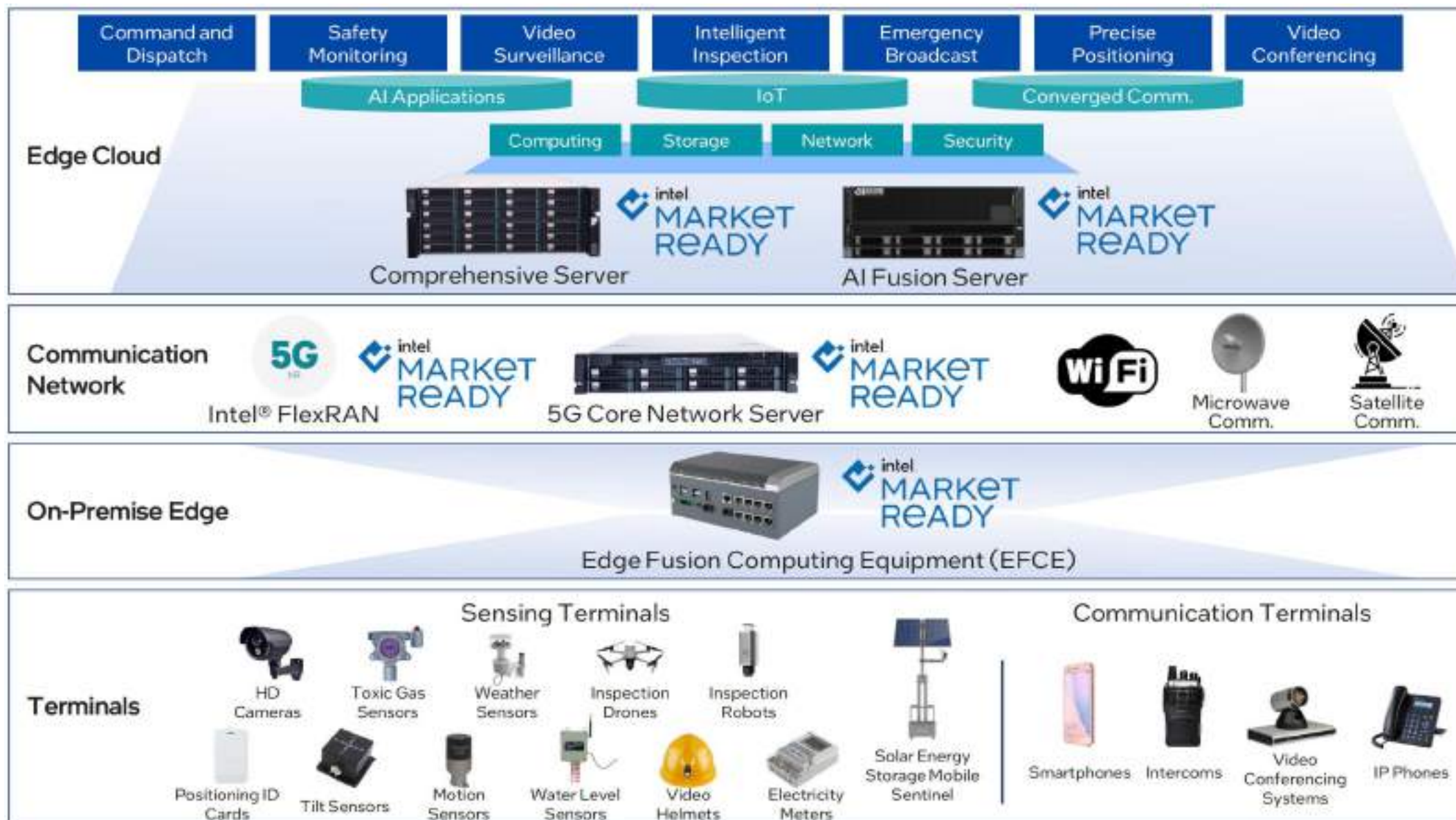
AI Meter Reading



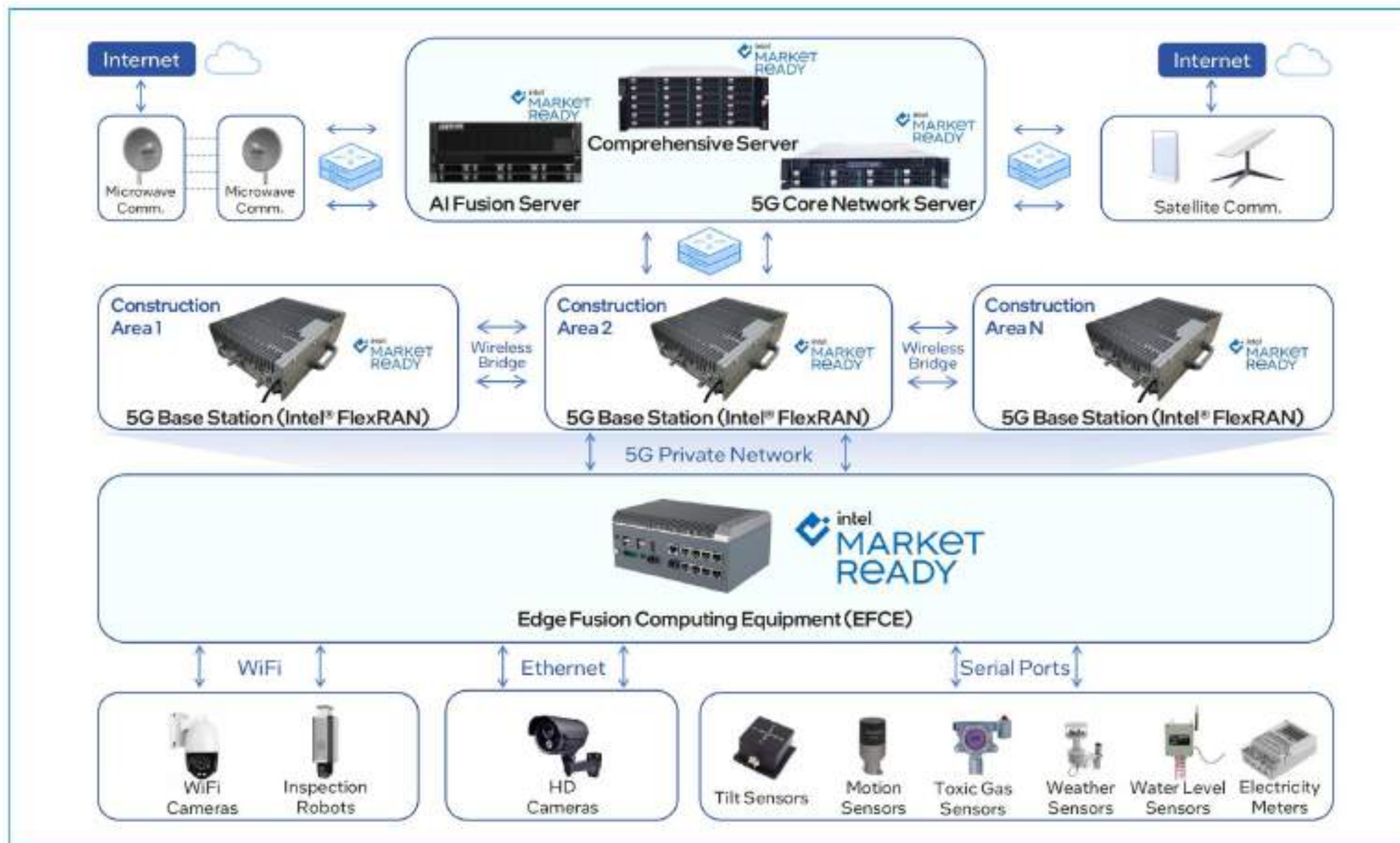
An aerial photograph of a construction site. In the foreground, there are several excavators, including a large blue one on the right and several orange ones in the center. A yellow container is on the left. The ground is dirt and gravel. In the background, there are stacks of steel beams and a large building under construction. Overlaid on the image are several translucent blue wireframe cubes and lines, suggesting a digital or augmented reality overlay. The text "Smart Construction Solution" is centered in a white box with a dark background.

Smart Construction Solution

Smart Construction Solution Architecture



Smart Construction Network Topology



Successful Cases of Smart Construction Solution

Ndúe Dam Construction Site

Take the **Ndúe Dam Smart Construction Site** project in **Angola** as an example. The project is based in Cuvelai, Cunene Province, Angola, about **900 kilometers** away from the **capital Luanda**.

Rontex Technology provides an **end-to-end Private 5G Network** for Power Construction Corporation of China's Angolan subsidiary, **offering voice, video, data, and conferencing services**. The **Private 5G Network transmission** utilizes **satellite backhaul**.



Angola Ndúe Dam Construction Site



Surveillance System Based on AI Video Analysis



5G base station powered by photovoltaic energy storage

- ✓ Components: Wireless, transmission, core networks, power supply, video surveillance.
- ✓ Advantages: High integration, rapid deployment, cost-effective, large capacity, lightweight.
- ✓ Problem solved: **Poor wireless coverage** at the dam site.
- ✓ Upgrades: Smart monitoring, **24/7 inspections**, improved safety and management.
- ✓ AI Functions: **Intrusion detection, motion detection, fence climbing, number plate recognition, flame/smoke detection, personnel and vehicle tracking.**

Successful Cases of Smart Construction Solution

AI Patrol for Small Indoor Construction Sites in Shenzhen

For small-scale indoor construction operations, Rontex's inspection robots are deployed across jurisdictional construction zones, with customized AI algorithms for enforcement teams. **Upon detecting violations**, the robots immediately issue **on-site verbal warnings** while **simultaneously alerting** neighborhood offices, community administrators, and enforcement units—enabling **real-time remote supervision**. This system monitors regulatory breaches, reduces accident rates, and enhances enforcement efficiency.



Rontex Operating Platform



Fast Deployment



Elevated work without safety belt



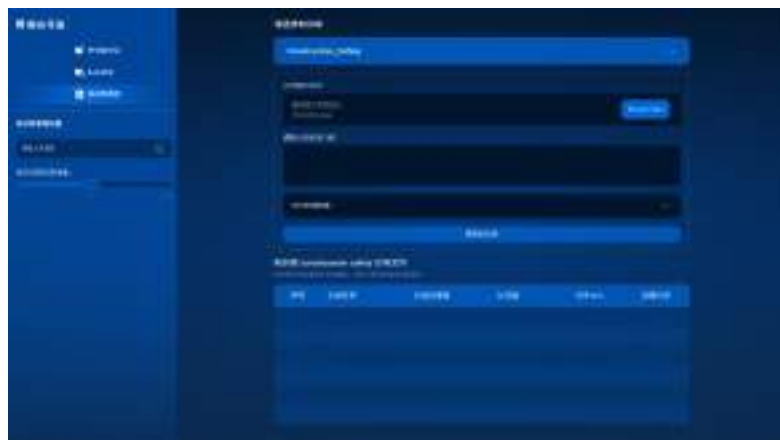
Not wearing helmet



Hot work operation

Successful Cases of Smart Construction Solution

Smart Construction Safety Inspection System “China Construction Science And Industry Corporation”



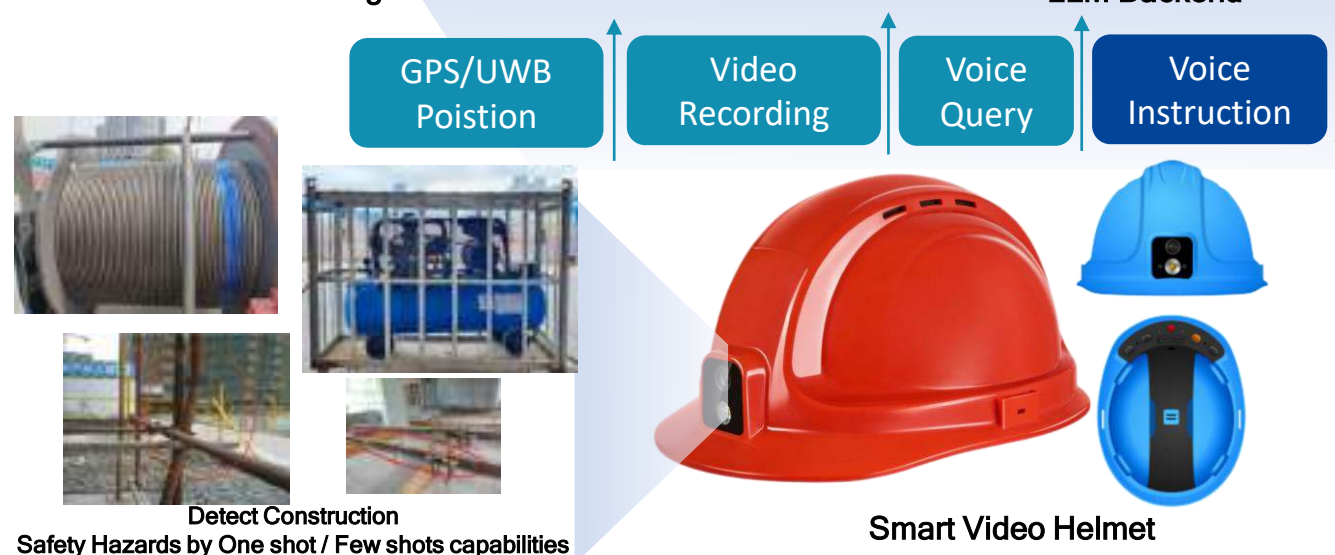
Construction Domain Knowledge and Regulations



High Performance Multi-Modal LLM Backend



Interactive device status and alarms insight through easy conversation



- ✓ Voice-Guided Safety Inspections via Smart Helmet — Follow standards, auto-score, auto-report
- ✓ Voice/Image Query During Inspection — Check parts, standards, risks with instant voice replies and reporting
- ✓ AI Hazard Detection via Helmet Camera — Auto-generate reports, assist rapid issue correction
- ✓ Trusted, Hallucination-Free Knowledge Output — Ensuring Timeliness and Accuracy

Successful Cases of Smart Construction Solution

Shenzhen Guiwan River Bridge Project



Guiwan River Bridge Project After Construction



Rontex Smart Construction Platform



Personnel Vehicle Material Access Control System



Construction Safety IoT Status Monitoring

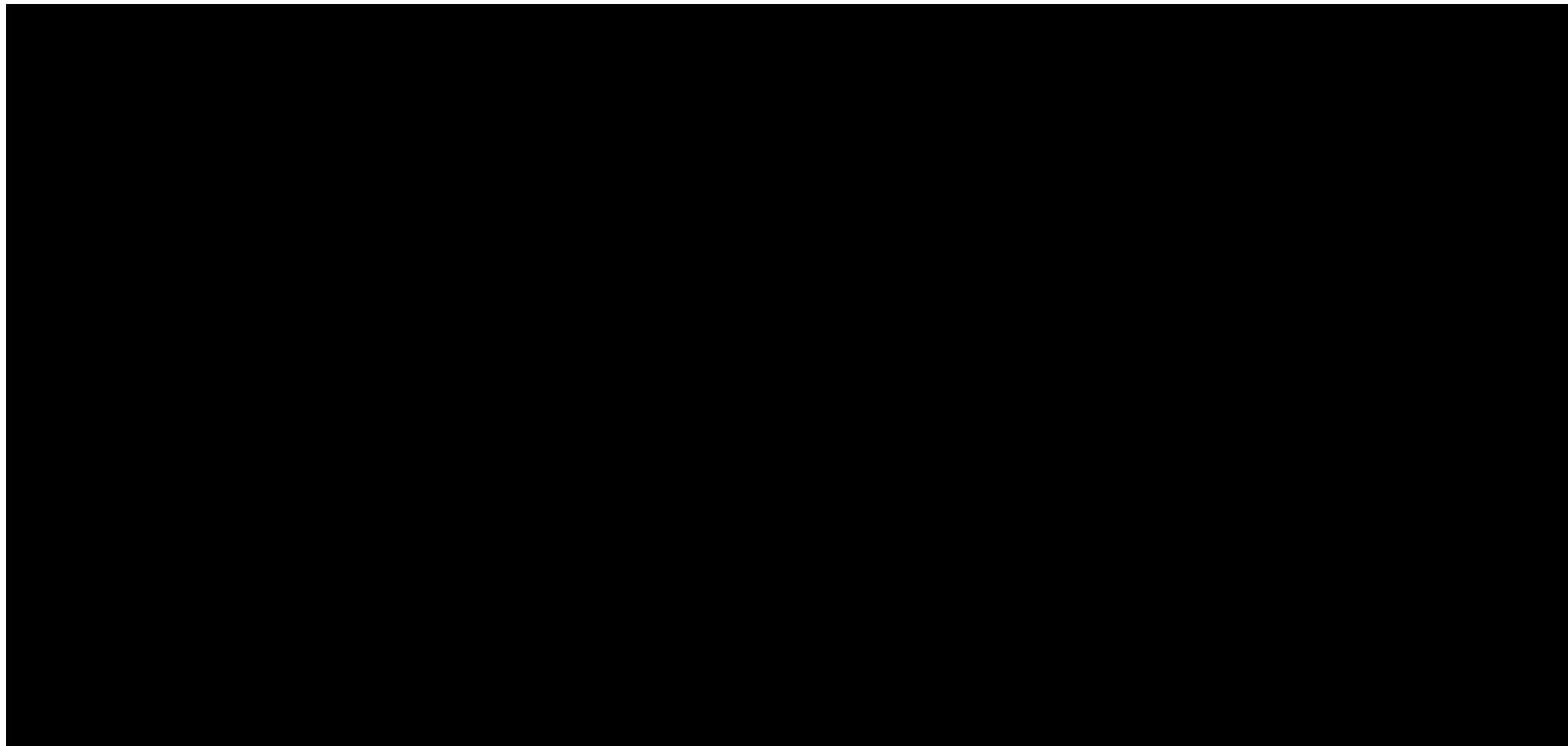


Construction Safety Visual Intelligent Analysis

- ✓ Tower crane monitoring: Real-time operation, operator ID recognition, safety alerts.
- ✓ Elevator monitoring: Real-time operation, operator ID recognition, violation alerts.
- ✓ Construction site violations: Boundary intrusion, open flame, helmet detection.

Typical Cases of Smart Construction Solution

Shenzhen Smart Construction Site Project



Thanks!

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