

Xinghe AI Campus

High-Quality 10 Gbps Office Campus Network

Leading Campus Networks in the AI Era

The Rise of Fully-Wireless, Digital, and Intelligent Office Services Drives Campus Network Upgrade.

Government campus

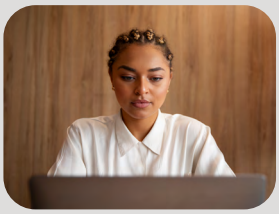


Wi-Fi security concerns hinder wireless adoption

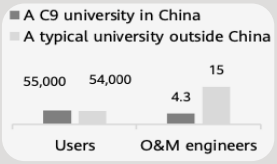


Wireless adoption rate (next 3 years) - 25% to 75%

Education campus



Manual O&M, time-consuming trouble ticket processing



> 50,000 university users
< 5 O&M engineers

Financial campus



38% ↑ network attacks
Avg. CNY10+ million financial losses per incident



Difficult terminal identification, high risks of spoofing & unauthorized access

Enterprise campus

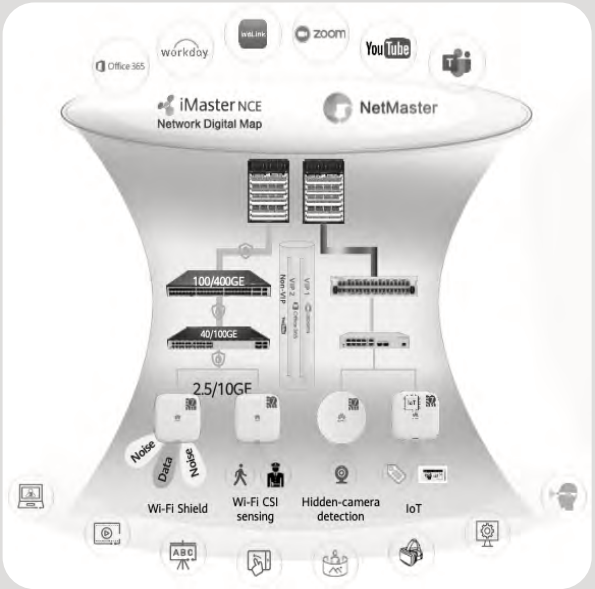


High user density, high bandwidth needs



App software package:
1 GB → 10+ GB
Download wait time:
> 50 min at 20 Mbps

High-Quality 10 Gbps Office Campus Network Solution



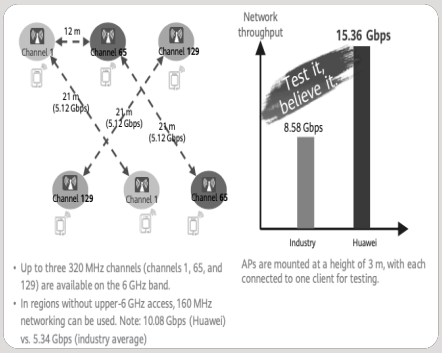
Superfast wireless
Wi-Fi 7 Advanced
Multi-AP coordination, 2× performance

Full-scope security
Asset security + connectivity security
+ spatial security + privacy security

Autonomous driving network (ADN)
80% of wireless faults auto-resolved

Superfast Wireless: Wi-Fi 7 Advanced; Multi-AP Coordination, 2× Performance

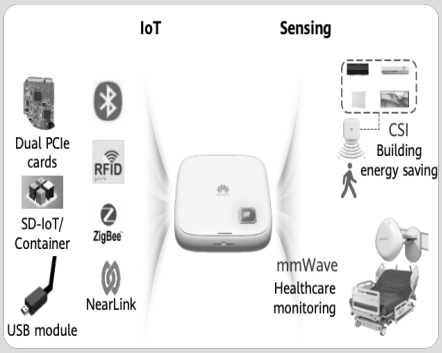
iCSSR (multi-AP coordination)



Dynamic-zoom smart antennas
+ microsecond (μs)-level
coordinated scheduling
Result with a 6-AP standard test model:
15.36 Gbps throughput, 2× that of competitors

*iCSSR: Intelligent Coordinated Scheduling and Spatial Reuse

Wi-Fi+X

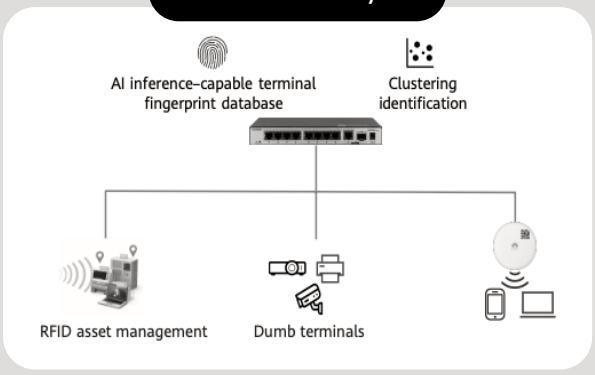


AP = Wi-Fi + IoT + Sensor
All-in-one (Wi-Fi + IoT + sensing) vs. siloed networks in the industry
TCO ↓ 50%

Full-Scope Security: Asset Security + Connectivity Security + Spatial Security + Privacy Security

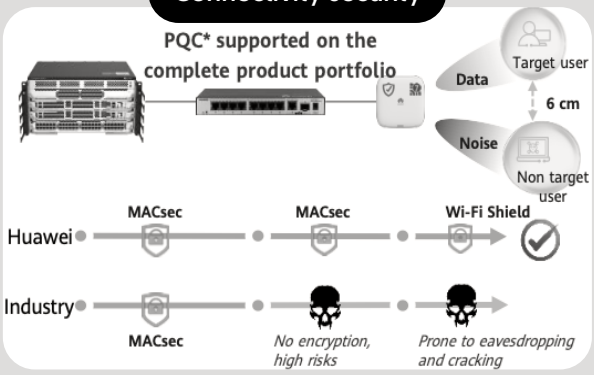
Digital world

Asset security



- AI clustering–based terminal identification: Automatically identifying 95% onboarded terminals and preventing spoofing or unauthorized access
- IoT-converged asset management, with clear visibility into asset locations

Connectivity security

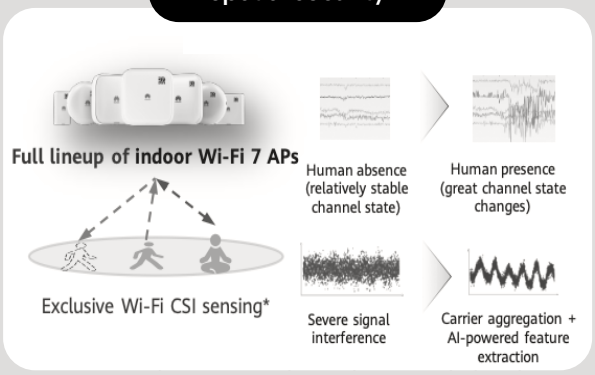


- Unique Wi-Fi Shield + E2E MACsec: Zero leakage of key information
- Full-link PQC: E2E cracking prevention

Full-Scope Security: Asset Security + Connectivity Security + Spatial Security + Privacy Security

Physical world

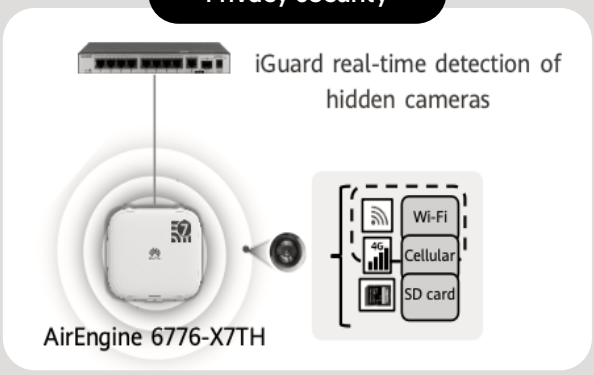
Spatial security



Presence detection: 1 AP (Huawei) vs. 2 APs (industry)
Centimeter-level micro-motion detection (Huawei) vs. only human motion detection (industry)

*CSI: Channel State Information

Privacy security



- Diverse types—cellular/Wi-Fi/SD card (Huawei) vs. limited types(industry)
- 10x detection accuracy—miss rate: < 5% (Huawei) vs. > 50% (industry)

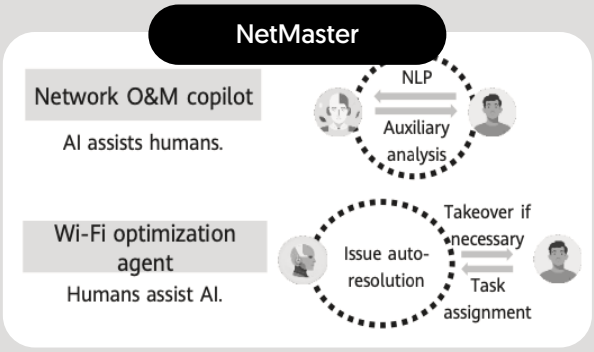
ADN: 80% of Wireless Faults Auto-Resolved

Network Digital Map



- One-map visibility into networks, users, terminals, and applications, E2E all-flow quality analysis
- Minute-level fault locating (vs. hour-level in the industry)

NetMaster



- Network O&M copilot: natural language interactions, minute-level troubleshooting (vs. hour-level in the industry)
- Wi-Fi optimization agent: L4 ADN, with 80% of wireless faults auto-resolved vs. L3 ADN, relying on manual fault resolution

Awards and Honors



[4 years in a row]
Named a leader in Gartner® Magic Quadrant™ for Enterprise Wired and Wireless LAN Infrastructure

[6 years in a row]
Recognized with Gartner® PeerInsights™ Customers' Choice for Enterprise Wired and Wireless LAN Infrastructure

[6 years in a row]
Honored with Gartner® Peer Insights™ Customers' Choice for SD-WAN

[4 years in a row]
Won the "Best Enterprise Wi-Fi Network" Award from WBA

Success Stories

City of Ekurhuleni, South Africa

Volkswagen, Brazil

Government of Girona, Spain

Oman Airports

National university of Singapore

JD.com, China

Extensive Product Portfolio

CloudEngine campus switches
CloudEngine S16700, S12700H, S8700, S6700, and S5700 series

AirEngine Wi-Fi 7
AirEngine 8700, 6700, and 5700 series

NetEngine AR routers
AR8000, AR6700, and AR5700 series

iMaster NCE
iMaster NCE-Campus
CampusInsight





Xinghe AI Campus

High-Quality Simplified Network

Bandwidth Assurance | Energy Saving |
Smart Architecture | Top-Notch Security

New Applications Require Higher Bandwidth, Making 10-Gigabit Upgrades Inevitable.

Wi-Fi 7 evolution enables the surge of heavy-traffic interactive applications, driving the demand for 10GE to the room.

AR/VR education



40 students per class and 200Mbps per terminal require far more than 1 Gbps bandwidth in the classroom.

Smart diagnosis and treatment

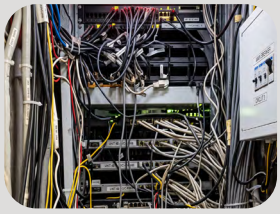


HD image reading and AI-assisted diagnosis (> 5 terminals, 500 Mbps /terminal) require far more than 1 Gbps bandwidth in each consultation room.

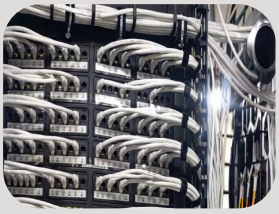
Wi-Fi 4	Wi-Fi 5	Wi-Fi 6	Wi-Fi 7
1 × FE/GE	1/2 × GE 1/2.5GE	1/2.5/5/10GE	2.5/5/10GE/ 25GE

Ever-increasing wireless traffic drives wired bandwidth upgrade.

Campus network transformation is difficult, the ELV room space is limited, and future-ready networks must be easier to evolve.



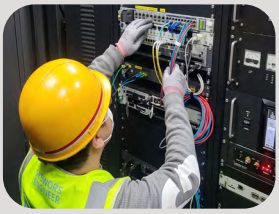
Lack of ELV rooms on some campuses, poor environment for deploying active devices, and high fire risks



Large volumes of Ethernet cables, which are heavy and complicate cabling



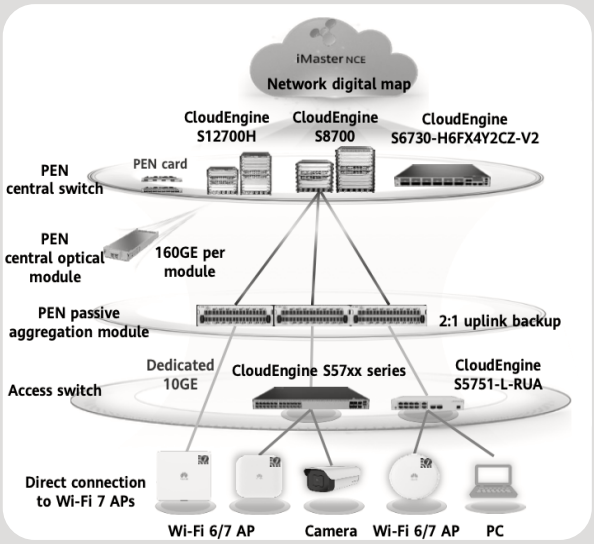
Difficult to drill holes through walls for new information points in classrooms



Too many managed NEs and high maintenance costs

With optical fibers routed to the edge, there's rising demand for maintenance-free and local-power-free deployment.

Huawei PEN Solution



10GE upgrade: Smooth network evolution over the next 10 years

- 160 Gbps bandwidth per module, no point-to-point bandwidth oversubscription
- Dedicated 10GE to the room via optical fiber

Unified architecture: 20% ↓ network CAPEX

- Simplified one-layer networking, lower device investment
- No need for protocol conversion, latency ≈ 5 μs
- Passive aggregation module—no ELV room required, 20% ↓ network energy consumption

Intelligent O&M: 10× ↑ O&M efficiency

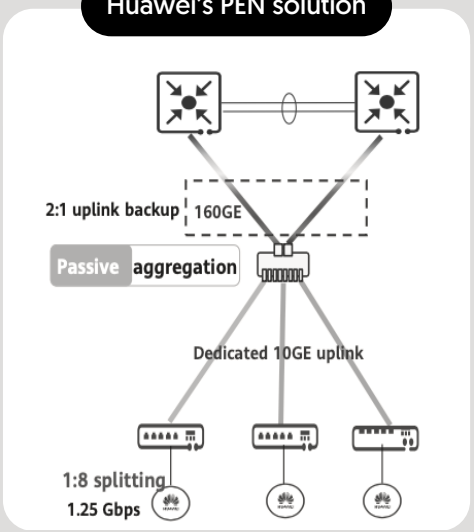
- Plug-and-play, configuration-free RUs
- Network digital map for network-wide visibility

Robust security and reliability: Zero service interruption

- Stacking/M-LAG, preventing fault spreading
- Fault detection and locating in seconds for optical

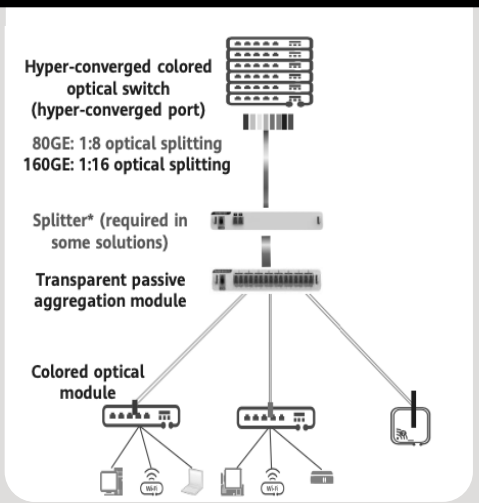
Huawei PEN vs. Colored Optical Network Solution in the Industry

Huawei's PEN solution



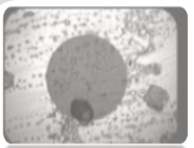
VS

Industry's colored optical network solution



Huawei PEN vs. Colored Optical Network Solution in the Industry

High reliability: Anti-contamination, zero packet loss



Dirty LC optical fiber connector



Clean LC optical fiber connector

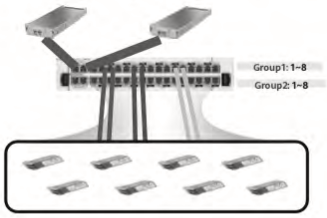
Contamination scenarios: Connector insertion and removal, splicing and maintenance, and equipment room environment (dust and electrostatic discharge)

98% VS Zero packet loss

Packet loss rate when the LC connector is contaminated (Data source: Real-world PoC test on a customer's live network)

Anti-contamination

Easy installation and maintenance: Mixed insertion of remote optical modules



Strict match VS Random mix

Whether mixed insertion of remote optical modules is supported in a group

Easy deployment

Higher safety: Class 1M lasers, ensuring eye safety



3R identifier



Class 3R VS Class 1M

Class 3R lasers are risky components and may cause irreversible damage to human eyes.

Eye-safe

Success Stories

Southwest Forestry University (1938)

Hetao College

Tianyuan College

YOEC

UPM

Extensive Product Portfolio

Modular switch: PEN card
LSG704CLX1E0 (used on S8700-6/10 & S12700H-4/8)

LSG708CLX1E0 (used on S8700-6 & S12700H-4)

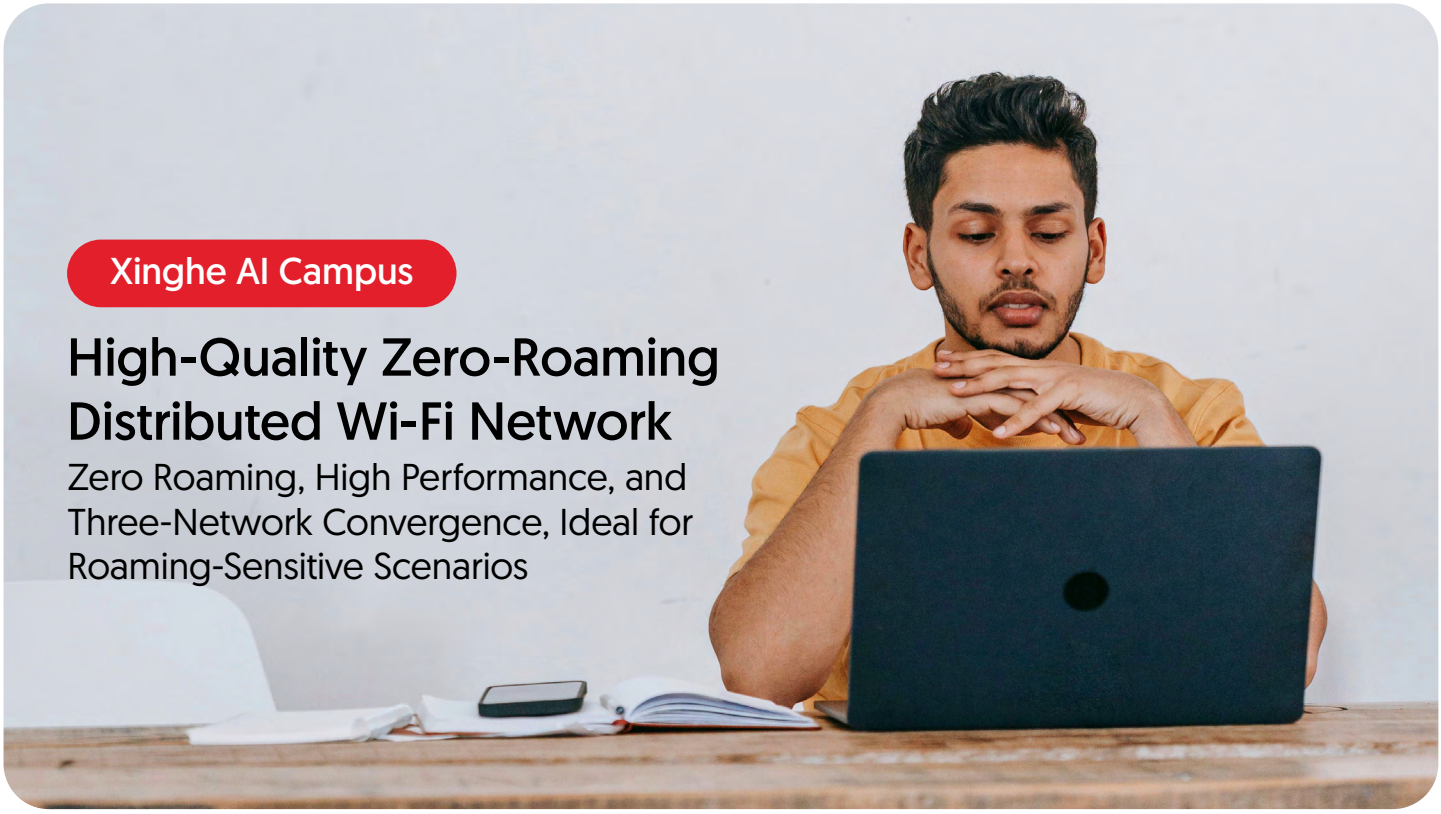
Fixed switch: PEN central switch
CloudEngine S6730 H6FX4Y2CZ-V2

PEN passive aggregation module
HW-PEN-16LC-2KM

HW-PEN-16LC-10KM

Access switch
Remote unit (RU): S5751-L-RU





Xinghe AI Campus

High-Quality Zero-Roaming Distributed Wi-Fi Network

Zero Roaming, High Performance, and Three-Network Convergence, Ideal for Roaming-Sensitive Scenarios

Smart Healthcare Accelerates, Bringing New Industry Challenges and Driving Network Technology Innovations.

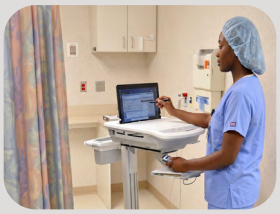


Image reading on medical carts

Insufficient bandwidth affects the efficiency of smart healthcare, such as remote consultation and image reading.

Low bandwidth and low efficiency



Wireless & mobile ward rounds

In mobile ward rounds and nursing, packet loss and service interruption frequently occur on PDAs during roaming.

Packet loss and service interruption



IoT & Wi-Fi convergence

Siloed IoT and Wi-Fi networks complicate network structure, making it difficult to locate devices.

High costs, difficult O&M, and difficult management



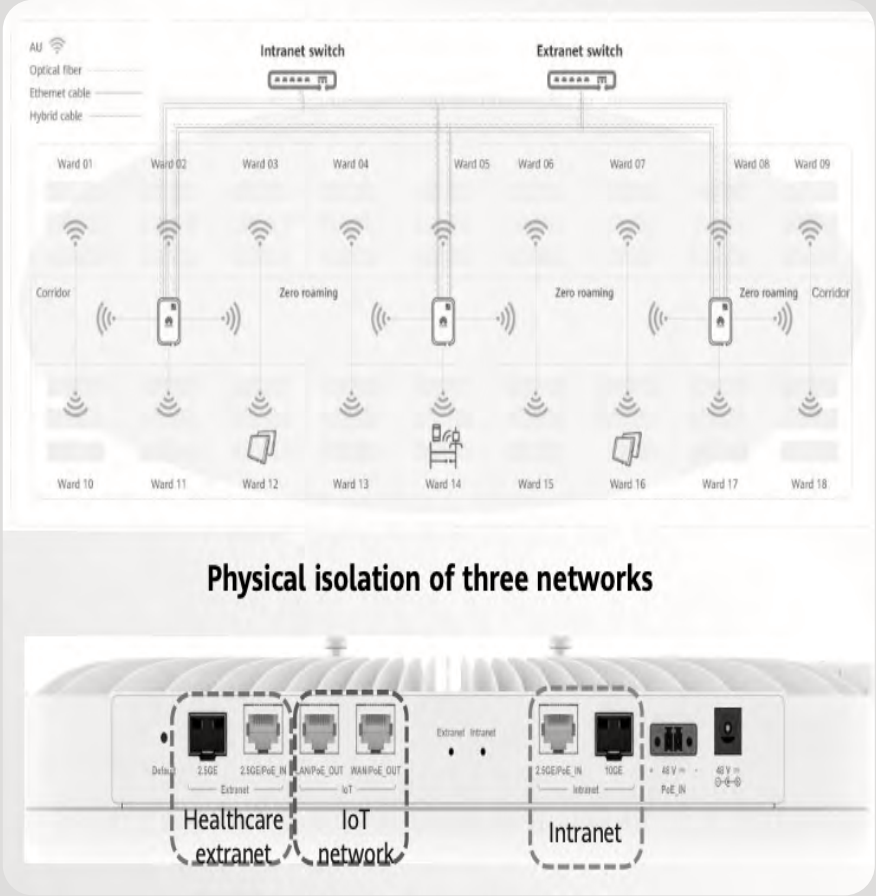
Simultaneous use of intranet and extranet

Services on the intranet can be basically guaranteed, but the extranet usage of patients and their families affects medical services.

Service slowdown

* Extranet: Used for Internet access from medical staff's personal devices and by patients.

Xinghe AI High-Quality Zero-Roaming Distributed Wi-Fi Network Solution Ideal for a Hospital-wide High-Quality Wireless Network



Four radios for high bandwidth

Wi-Fi 7 on both intranet and extranet, up to 7.14 Gbps data rate

Wide coverage and zero roaming

Hospital-wide AP virtualization into one logical AP for zero roaming; one AP for eight rooms, unlimited AP expansion, zero packet loss during STA mobility across the hospital

Room-level positioning

Innovative IoT AU solution for room-level positioning

Three-network physical Isolation

Converged deployment and secure isolation of intranet, healthcare extranet, and IoT networks, TCO ↓ 60%

Stand-Out Features

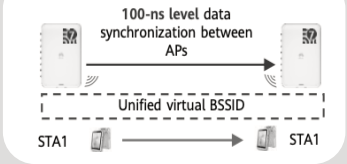
Four radios for high bandwidth



Up to 7.14 Gbps data rate
Wi-Fi 7 on both intranet and extranet

Spatial streams: 2+2+2+2 (dual 2.4 GHz radios + dual 5 GHz radios)

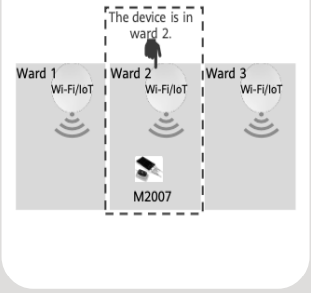
Wide coverage and zero roaming



Hospital-wide APs are virtualized into one logical AP,enabling zero roaming.

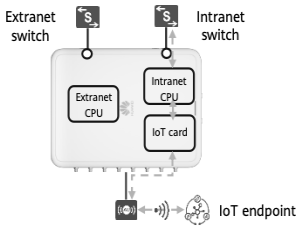
Stand-Out Features

Room-level positioning



The indoor IoT antenna unit (AU) enables real-time visibility into asset/personnel trajectories in the hospital.

Three-network physical Isolation



Intranet, extranet, and IoT networks are physically isolated from each other.

First People's Hospital of Shunde in China

- Known as a large, modern Class III Grade A comprehensive hospital that offers medical services, teaching, and research.
- Deployed Huawei's high-quality zero-roaming distributed Wi-Fi network solution to build a zero-roaming hospital campus network with physical isolation of extranet, intranet, and IoT networks.
- Resulting benefits: High bandwidth for medical image viewing and consultation, zero roaming and higher efficiency for ward rounds, lower CAPEX due to Wi-Fi and IoT convergence, and more secure data thanks to intranet and extranet isolation

Extensive Product Portfolio

Zero-roaming Wi-Fi 7 AP

AirEngine 6776-26HD



Intranet
- Up to 3.57 Gbps data rate
- Spatial streams: $2^{2.4\ GHz} + 2^{5\ GHz}$
- BLE 6.0
- 1 × 2.5GE RJ45 + 1 × 10GE SFP+

Others
- 2 × GE RJ45 (PoE OUT)
- 8 × SMA Wi-Fi
- 2 × SMA IoT

Extranet
- Up to 3.57 Gbps data rate
- Spatial streams: $2^{2.4\ GHz} + 2^{5\ GHz}$
- BLE 5.2
- 1 × 2.5GE RJ45 + 1 × 2.5GE SFP

AU

- 1 × SMA-K
- Dual bands: 2.4 GHz + 5 GHz

Twin-engine switch

CloudEngine S5755-S48P4X4Y-HT

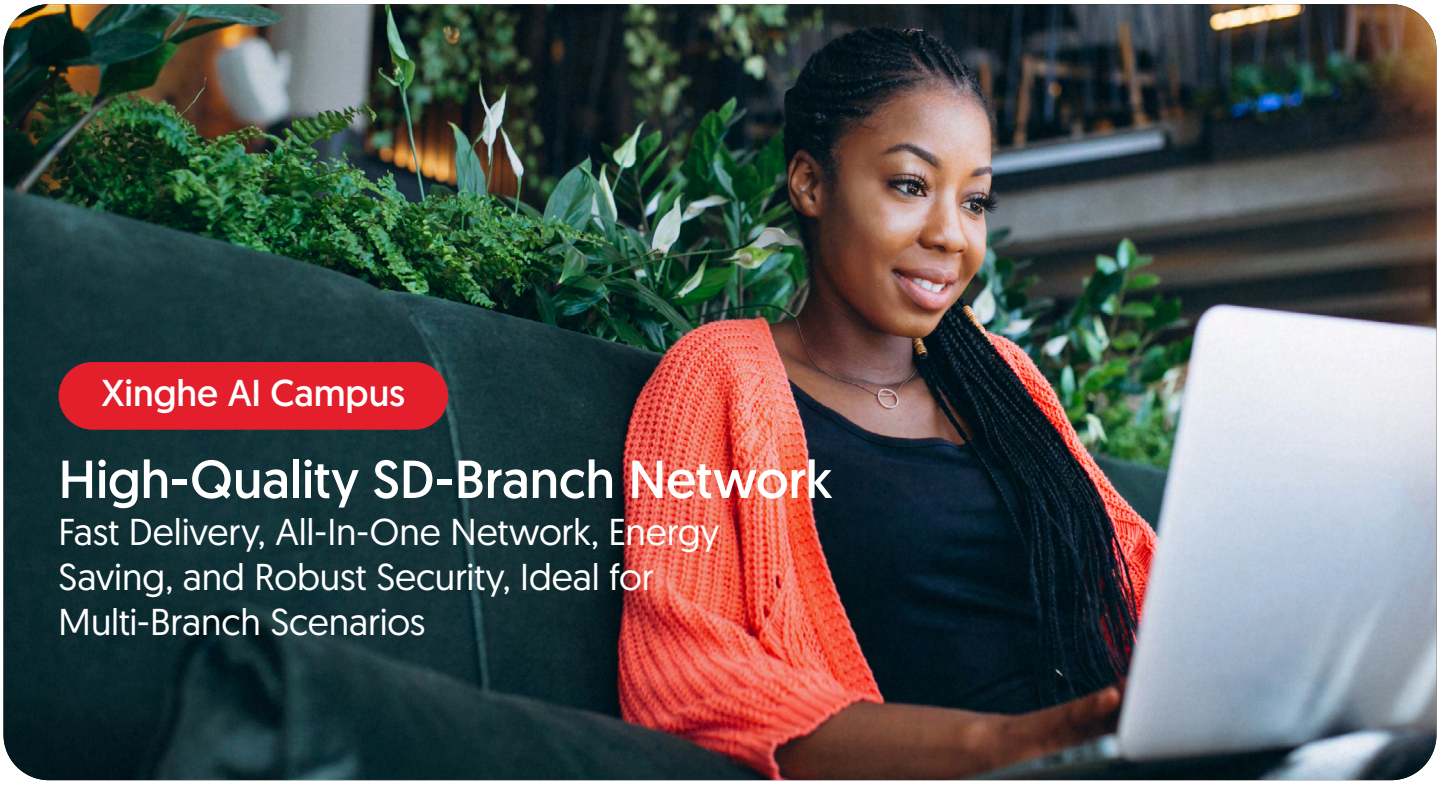


- Downlink: 48 × GE Base-T, which can connect to Wi-Fi 7 APs
- Uplink: 4 × 10GE + 4 × 25GE SFP28
- 1+1 power backup
- PoE+
- Air cooling
- Full-link MACsec encryption

CloudEngine S5755-S48T4X4Y-HT



- Downlink: 48 × GE Base-T, which can connect to Wi-Fi 7 APs
- Uplink: 4 × 10GE + 4 × 25GE SFP28
- 1+1 power backup
- Air cooling
- Full-link MACsec encryption



Xinghe AI Campus

High-Quality SD-Branch Network

Fast Delivery, All-In-One Network, Energy Saving, and Robust Security, Ideal for Multi-Branch Scenarios

Digital and Intelligent Transformation Drives Branch Network Upgrade

Retail

Slow expansion



Complex network deployment and slow provisioning (> 2h per store) with traditional solutions

↓

Faster store network deployment and higher ROI

Untimely price update



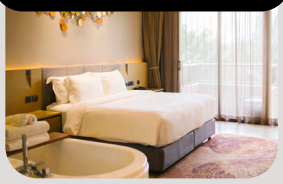
Slow replacement of paper price tags, high costs (US $200,000/year)

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Faster price update at lower costs with electronic shelf labels (ESLs)

Hotel

Energy waste

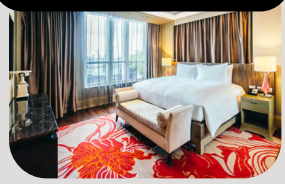


Lights and air conditioners still on in unoccupied rooms (waste of 280,000 kWh electricity a year)

↓

Guest-unaware detection for lower costs and higher efficiency

Privacy breach

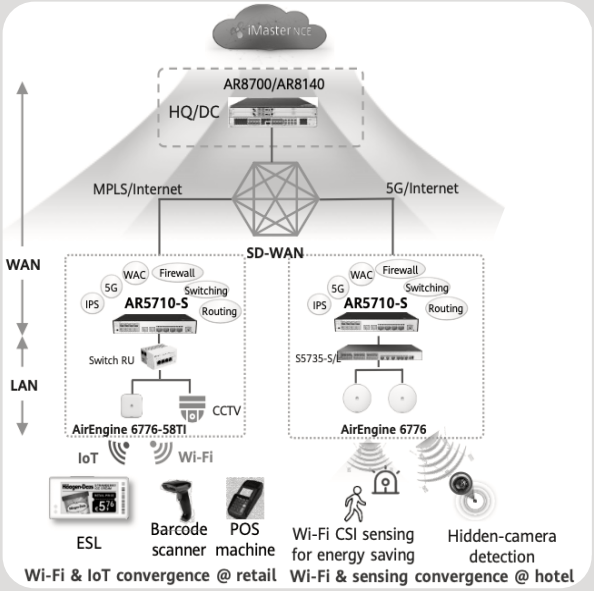


Difficult to detect hidden cameras, high risks of privacy breaches

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Efficient detection of hidden cameras for privacy protection

High-Quality SD-Branch Network Solution



Fast deployment
Automatic site deployment
Service provisioning in minutes

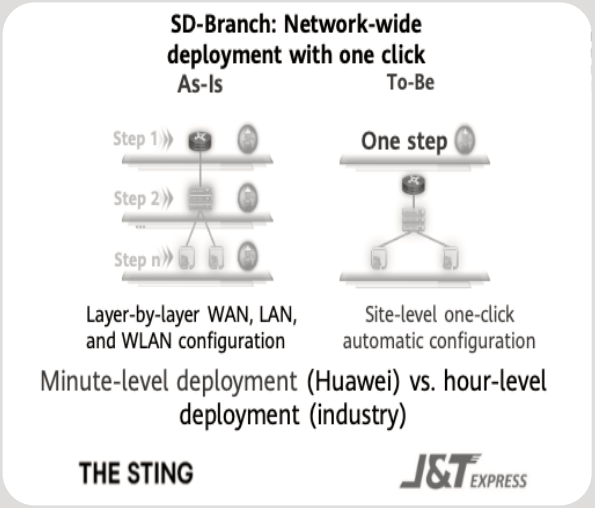
All-in-one network
Multi-network convergence
TCO ↓ 50%

Energy saving
Wi-Fi CSI sensing
15% lower energy consumption

Privacy security
Real-time online detection of hidden cameras at 10× the industry average accuracy

High-Quality SD-Branch Network Solution @ Retail

Fast deployment



All-in-one network

- PCIe card
- Built-in IoT
- USB module



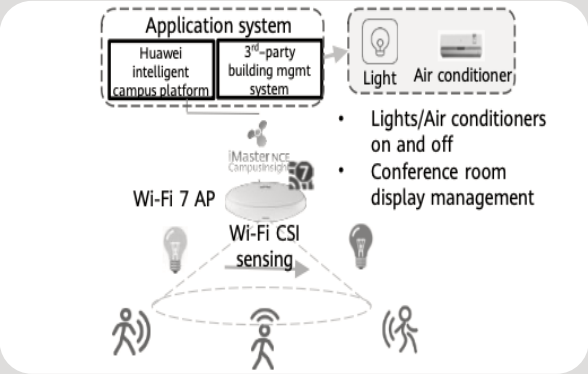
AirEngine 6776-58TI

AP = Wi-Fi + IoT + Sensor
All-in-one (Wi-Fi + IoT + sensing) vs. siloed networks in the industry
TCO ↓ 50%

Müller
Poly

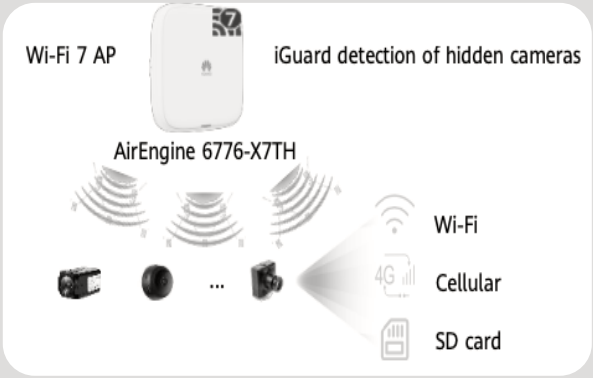
High-Quality SD-Branch Network Solution @ Hotel

Energy saving



- Campus-level energy saving: Wi-Fi CSI-based smart space sensing, saving campus energy by 10%
- Network-level energy saving: AI-powered tidal energy saving algorithm, saving network device energy by 30%

Privacy security



- All-round: Diverse camera types (Huawei) vs. limited camera types (industry)
- Accurate (10x accuracy): miss rate: < 5% (Huawei) vs. > 50% (industry)
- Always-on: 24/7 (Huawei) vs. Periodic (industry)

Extensive Product Portfolio

NetEngine AR series routers
NetEngine AR5710-SE, AR8000, and AR610 series

AirEngine Wi-Fi 7
AirEngine 8700, 6700, and 5700 series

CloudEngine campus switches
CloudEngine S8700 and S5700 series

iMaster NCE
iMaster NCE-Campus/ CampusInsight





Xinghe AI Campus

High-Quality 10 Gbps Production Campus Network

Stable, Reliable, Flexible, Easy to Use, and ideal for Smart Manufacturing, Transportation, and Electric Power

Industry Digital Transformation Accelerates, Posing New Requirements on Production Campus Networks.

Smart manufacturing



- Siloed IT and OT systems cannot directly communicate with each other.
- Machines on production lines are suspended for 3 to 5 times per year on average.

Smart transportation



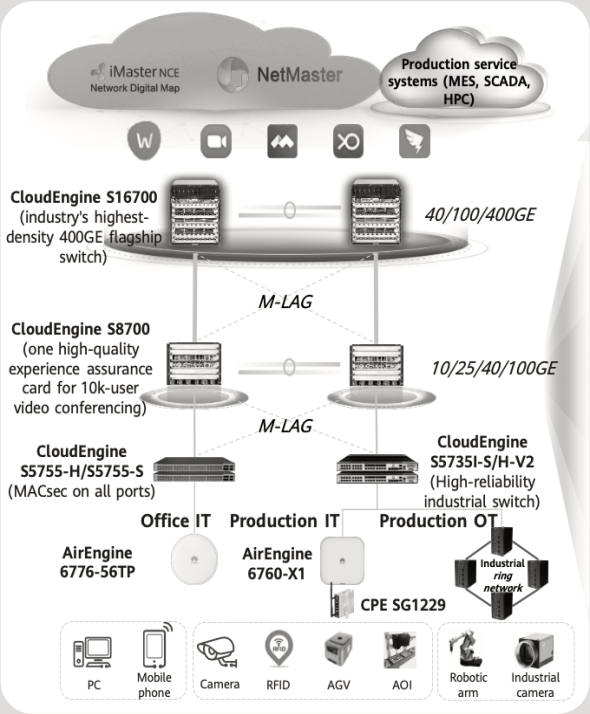
- Harsh outdoor environments, high device maintenance costs, and slow fault rectification (avg. 1 to 6 hours each time)

Smart electric power



- Inefficient manual inspection, fast-growing video services for safe production (avg. 50%+ growth per year)

High-Quality 10 Gbps Production Campus Network Solution



Named a leader in 2022–2026 Gartner® Magic Quadrant™

High bandwidth for office & production services

- 10+ Gbps throughput
- GB-level file downloading in seconds

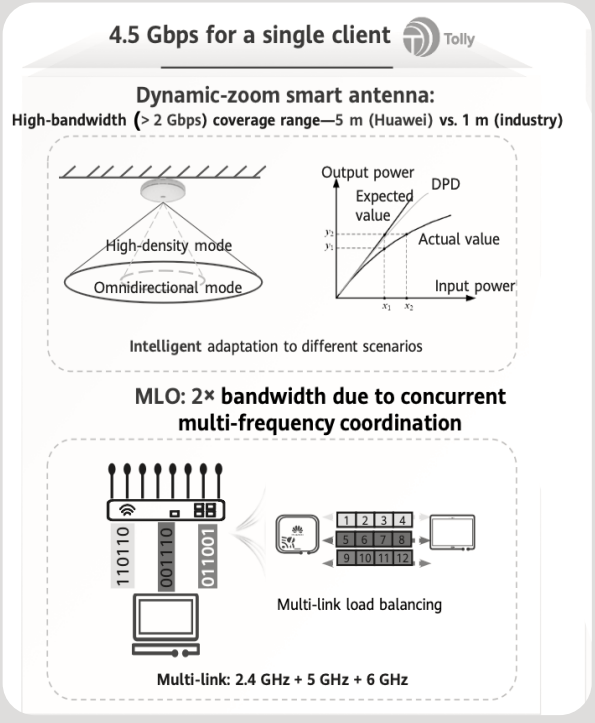
Highly reliable production

- System-level reliability
- Always-on production services

IT & OT convergence

- Unified O&M, fault locating within minutes
- 1 person managing one factory-wide network

High Bandwidth for Office & Production Services: TLC
Tolly-Certified Single-Client Rate of 4.5 Gbps, Leading the Industry

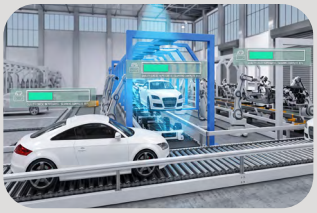




3D CAD large file transfer @ R&D environment

2 GB CAD file downloading

6 minutes @ 45 Mbps → Second-level @ 500 Mbps



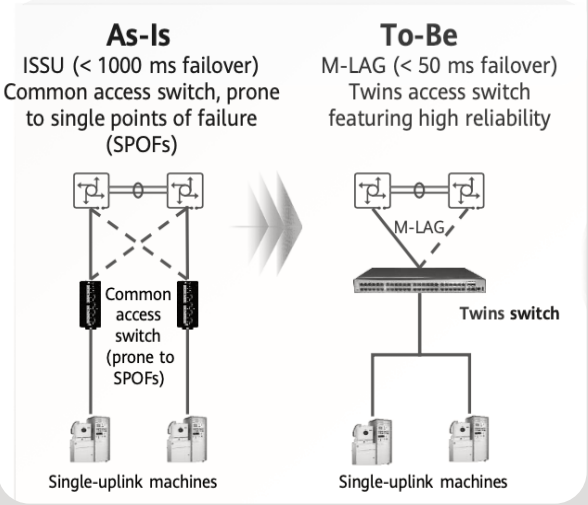
Intelligent automotive production

Data loading (50 GB/vehicle)

12 minutes @ 55 Mbps Second-level @ 500 Mbps

Highly Reliable Production: M-LAG + Twin-Engine Access Switch, Ensuring Zero Service Interruptions

Industry's first twin-engine access switch





Precision electronics & semiconductors

Single-uplink machines, prone to SPOFs

Service interruption (no redundancy, > 3 min reset) → Zero service interruption (sub-second recovery)

IT & OT Convergence: Network Digital Map for 4-Level Visibility and Intelligent O&M, Improving Efficiency by 10 Times

The innovative network digital map ensures experience detection,fault handling, and assurance for applications, users, terminals, and networks.



One-map visibility, network-wide status awareness

- One-map display of application, user, terminal, and network information
- Industrial ring network, PRP, and HSR topology visualization

One-second demarcation, 90% higher fault locating efficiency

- User journey playback, easy to backtrack experience-related issues
- Unified O&M across IT and OT, fast fault demarcation

One-click optimization, rapid assurance for key services

- One-click VIP setting, VIP-first wireless access
- Three-step application assurance and highest-priority scheduling

Success Stories

Extensive Product Portfolio

CloudEngine campus switches
CloudEngine S5735I-S/H-V2, S5731I-L, S1731I-L, and S5755-S-HT series

AirEngine Wi-Fi 7
AirEngine 8700, 6700, and 5700 series

NetEngine AR series routers
NetEngine AR502H-V2 series

iMaster NCE
iMaster NCE-Campus/ CampusInsight

