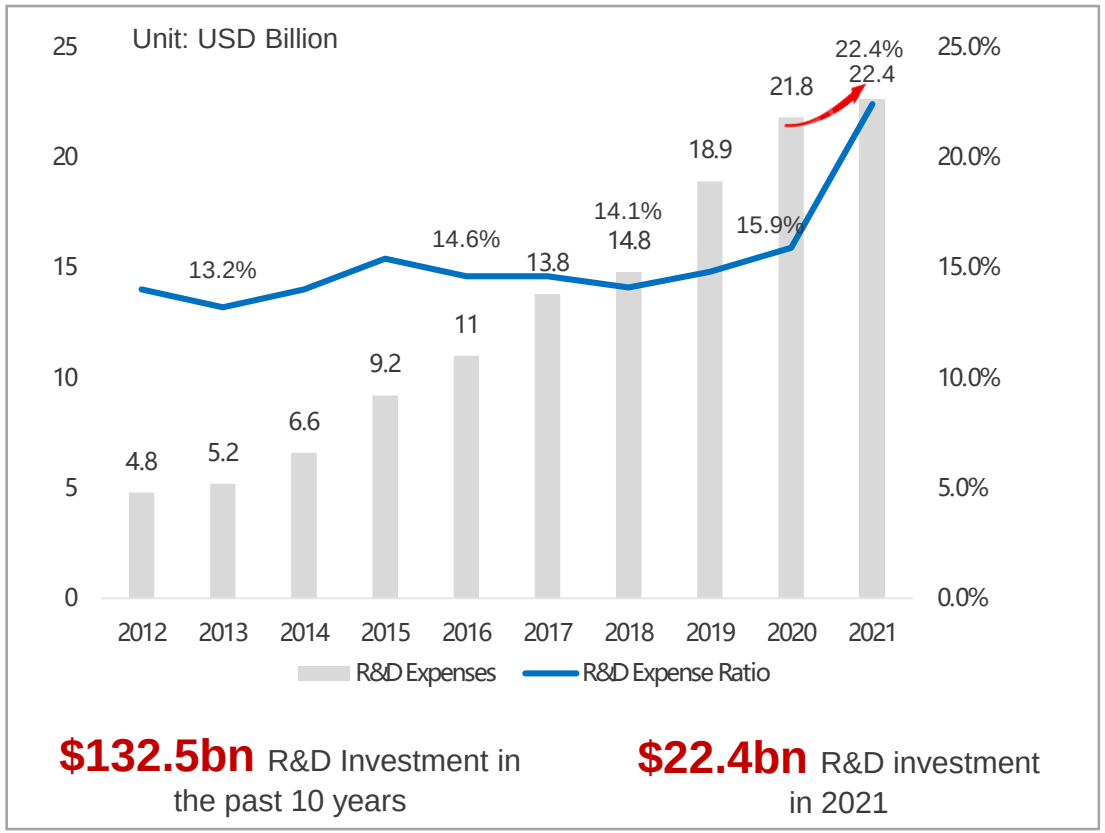
Huawei Enterprise ICT Solutions Introduction

Heavy & Persistent R&D Investment: Leading in the Industry

R&D Investment in 2021 Hits a 10-year High



Source: Huawei annual report, 2021

No.2 In Global Industrial R&D Investment

Ranking		R&D Spending (€ Bn)		CAGR
2016	2020			
4	1	Alphabet	22.47	15.3%
8	**2**	HUAWEI	**17.46**	**13%**
5	3	Microsoft	16.88	9.7%
2	4	SAMSUNG	15.9	7.5%
11	5		15.28	13.3%
29	6	Meta	15.03	25.5%
1	7		13.89	0.3%
7	8	Roche	11.25	4.2%
3	9	intel	11.05	1.2%
9	10	Johnson&Johnson	9.91	6%
17	26	cisco	5.17	-2%
35	41	ERICSSON	3.89	0.2%
25	44	NOKIA	3.84	-4.3%

Source: 12.2021,The 2021 EU Industrial R&D Investment Scoreboard

HUAWEI

We are a Leading Global Provider of ICT Infrastructure and Smart Devices

Digital Power

Site Power

No.1 35.6% MS

Prefabricated modular DC

No.1 for 7 years

Smart PV

No.1 for 6 years

Embedded Power

809Mn pcs delivered

Intelligent Auto Solution

US$1.5 billion
in R&D investment in 2022

7,000
R&D personnel

One of the fastest-growing intelligent EV brands

An intelligent, electric luxury SUV

AITO M5

AITO M7

Jointly designed by SERES and Huawei

Smart Devices

1 + **8** + **N**

Mate Xs 2
Flagship

30%↑
Revenue of
Watch + Earphone + IdeaHub

2000+
HarmonyOS
Connect Partners

Connectivity Infrastructure

MetaAAU

+30%
Coverage

+30%
Throughput

-30%
Energy Saving

Cloud

No. 2
In China

No. 5
In Global

NAs **59%**

Sales **105%**

3mn+ Developers

7,400+ partner applications

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Huawei' World-leading Enterprise ICT Products & Solutions

Device

CPE

Industrial Equipment

IdeaHub

Government	Finance	Energy	Transport	Education	Health	Manufacture
Smart City	Smart Fin.	Interconnection	Smart Trans.	Interaction	AI analysis	Flexible
Tax, Billing, Insurance	Banks	Power	Railway	University Schools, Remote Edu	Telemedicine,	Manufacturing cell,
	Stock	Gas	Highway			

Data Center

Storage No.1 *Source: Gartner*

SDN DCN No.2 *Source: IDC*

Security

Network

Wi-Fi No.3 *Source: Gartner*

Campus No.2 *Source: IDC*

Optical No.1 *Source: OVUM*

IP Router No.1 *Source: IHS*

AI

Intelligent Edge Computing

Processors

SDN

Data Center

iMaster NCE

HUAWEI

Huawei Provides End-to-end Data Communication Portfolios

Solutions

Campus Network | Wide Area Network | Data Center Network | Cyber Security

Products

Campus Network Products

100G Core Switches

All-Scenario WIFI 6 Access Point

Multi-GE Access Switches

Campus Switches and APs

SD-WAN ready ARs

Access Router

Wide Area Network Products

All Services Backbone Routers

Intelligent Metro Routers

Data Center Network Products

AI-based DCN Spine Switches

10-100G TOR Switches

25-100G RoCE-based SAN

Data Center Switches

Cyber Security Products

T-bits NGFW

1-100G NGFW

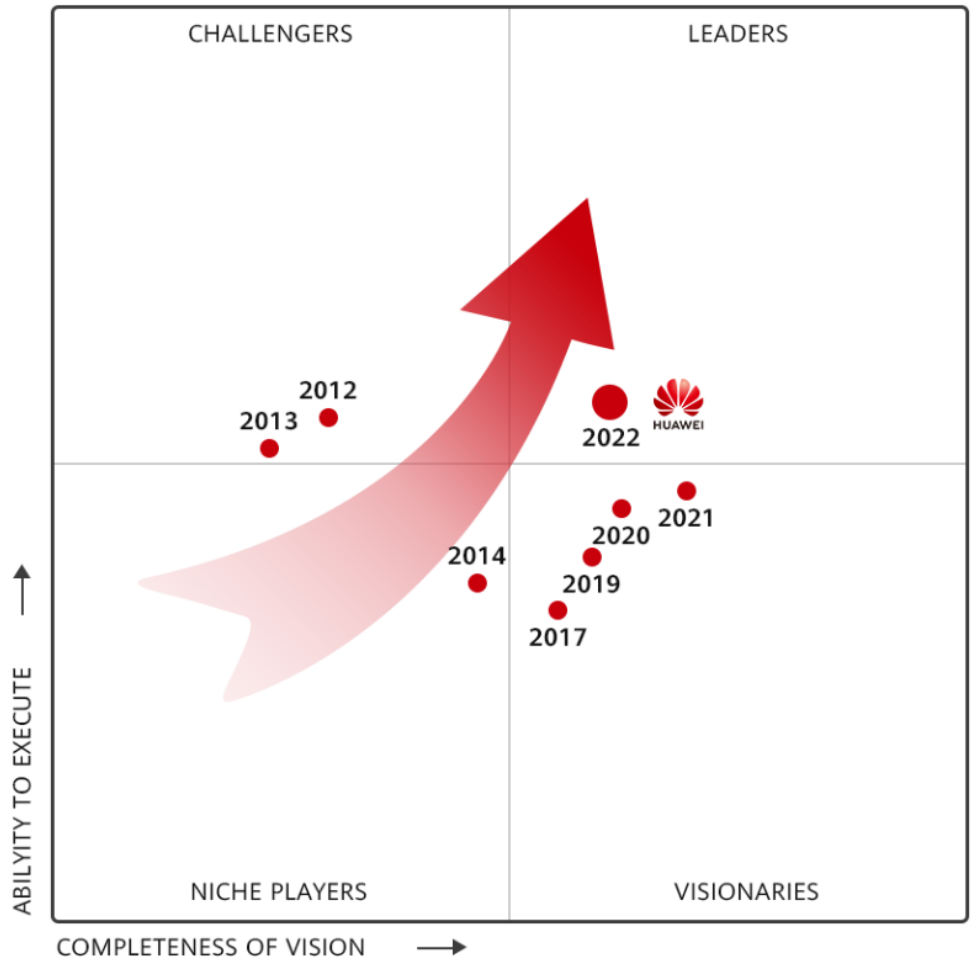
NG Firewalls

Professional Standalone Anti-DDoS

Anti-DDoS

HUAWEI

Wired and Wireless LAN: The Leader in the 2022 Gartner Magic Quadrant



Magic Quadrant™ for Enterprise Wired and Wireless LAN Infrastructure

Simplified O&M »»

L3.5 autonomous driving

Manual O&M □ Intelligent O&M

68% ↑

O&M efficiency

Simplified branch »»

One global network

Secure multi-cloud and multi-branch interconnections

100% ↑

cloud access efficiency

Simplified network »»

Hyper-converged architecture

IT/OT convergence
One network for workplace and production environments

Zero

production interruptions

Superior experience »»

Interruption-free video conference

Seamless access

X00 Mbps @ Anywhere

30% ↑

productivity

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WLAN Differentiator 1: X00 Mbps @ Anywhere, Winning Every Test, Ideal for Office and Education Scenarios

Trends, pain points, and opportunities

Upgrade of Wi-Fi 4/5

Live-network installed based: 60/40 million
EOX in 2023: 16/8 million

Wireless Trend

Fully-wireless	Number of STAs per user	1	→	2+
	Number of STAs/AP	30	→	60
Audio and video preference	Application	80% data	→	80% audio and video
	Single file transfer	100 MB	→	1 GB
No speed drop during movement	Office mode	Fixed PC	→	Smartphones in mobility

Poor office experience

Huawei's unsmooth conferences in 2021: 230,000
Separated networks and applications, poor VIP user experience

ByteDance
60%+ channel utilization for long time
Poor experience in video conference

X00 Mbps @ Anywhere: consistent experience

AirEngine
Entry-level and mid-range

100 Mbps @ Anywhere – Commercial

30 channels of HD video conferences without frame freezing
Typical scenario: 100 Mbps anytime anywhere + 8-channel HD conference

AirEngine
Mid-range and high-end

200 Mbps @ Anywhere – N/A

50 channels of HD video conferences without frame freezing
Typical scenario: 200 Mbps anytime anywhere + 8-channel HD conference

AirEngine 8771-X1T
Wi-Fi 7 AP

NEW

500 Mbps @ Anywhere – N/A

120 channels of HD video conferences without frame freezing
Typical scenario: 500 Mbps anytime anywhere + 30-channel HD conference

Large enterprise

Education

Commercial

Consistent experience regardless of access density, loads, or movement

Ultra-high-density access

30/50/120 channels
Vs. 25/30/80 channels (other vendors)

OFDMA + MU-MIMO joint scheduling 2.0
Air-interface traffic pre-aggregation
Coordinated Spatial Reuse (CoSR)

Audio and video assurance

HD conference + **100/200/500** Mbps anytime anywhere
Vs. 30/40/100 Mbps (other vendors)

Intelligent multimedia scheduling 2.0
Intelligent scenario identification and network self-optimization

Seamless coverage and roaming

No compromise of roaming bandwidth
vs. 50% decrease in roaming bandwidth (other vendors)

AI-based network planning
Dynamic-zoom smart antennas
AI roaming

HUAWEI

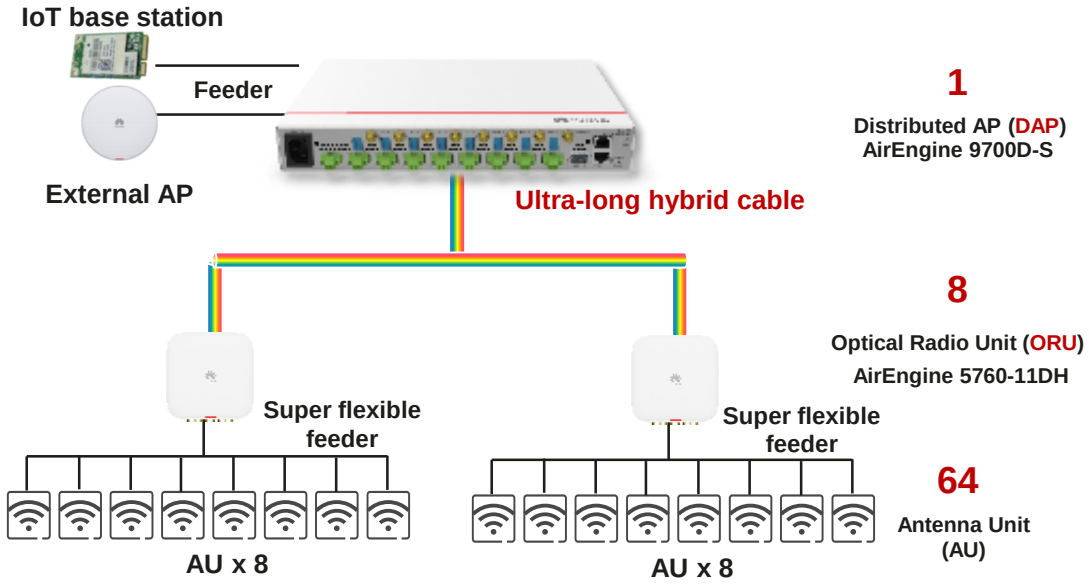
WLAN Differentiator 2: Distributed Wi-Fi, Zero Roaming for 64 Rooms, Zero Service Interruption in Healthcare Scenarios

Pain points

Pain points in healthcare network scenarios

- Roaming packet loss: Slow response of PDA-based barcode scanning, resulting in low efficiency of nurses
- Low bandwidth: Long-time waiting for querying PACS images during mobile ward-round of doctors
- Separate deployment of intranet and extranet: high deployment and O&M costs

Distributed Wi-Fi: wide coverage, zero roaming



Coverage for 64 rooms

Ultra-long hybrid cable, 500 m deployment

All RUs on the same channel, zero roaming and zero packet loss

Healthcare

To be deployed in:
- 301 Hospital
- Zhejiang Provincial Hospital of Chinese Medicine

Product competitiveness

Zero roaming

Distributed architecture, **zero roaming**, **zero packet loss** for moving STAs

Wide coverage

Zero roaming for **64** rooms
500 m ultra-long hybrid cable
Cross-floor deployment

High bandwidth

8T8R multi-concurrency, 1.8 Gbps network bandwidth

Three-network convergence

Converged deployment for the intranet, extranet, and IoT network
60% ↓ TCO

No counterpart solution is available for vendors C and A.

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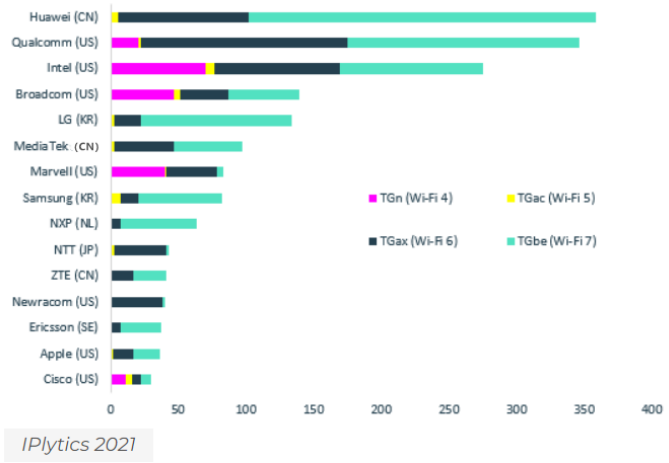
WLAN Differentiator 3: Industry's First Enterprise-Class Wi-Fi 7, Creating a New Era of Ultimate Experience

AirEngine 8771-X1T

AirEngine 8771-X1T

- 4 (2.4 GHz) + 4 (5 GHz) + 4 (5/6 GHz, switchable)
- Theoretical rate: 18.67 Gbps
- Ports: 2 x 10GE electrical + 1 x SPF+ (hybrid cable)

Wi-Fi 4 to Wi-Fi 7 standard contributions: **Top 1**



IPlytics 2021

Enterprise office

Education

Product competitiveness

Huawei-only

500 Mbps @ Anywhere

120 channels of HD videos without frame freezing
Typical office scenario: 30-channel HD conference + 500 Mbps anytime anywhere

Superb performance

18.67 Gbps vs. 10.75 Gbps, twice the bandwidth of Wi-Fi 6
On-demand multi-radio switching

Super-strong signal

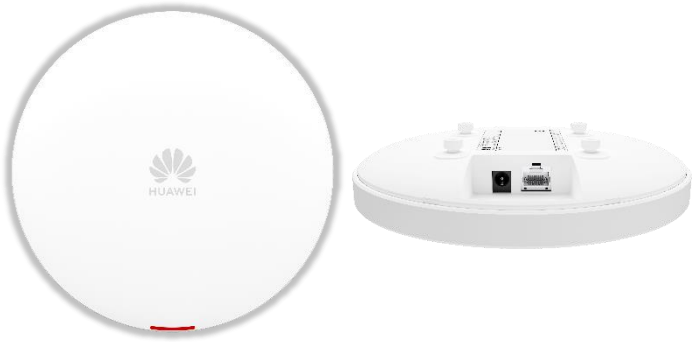
Third-generation dynamic-zoom smart antennas, 30% higher performance than the industry average

Ultra-low latency

Latency < 10 ms, no frame freezing in VR conferences

WLAN Differentiator 4: Cooperation with MSPs to Expand Sales Boundaries, Enable Partners, and Expand the Run-Rate

Two new products, stronger competitiveness, and ultimate cost-effectiveness



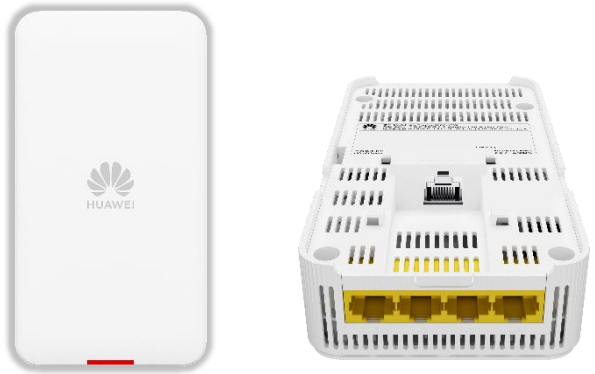
AirEngine 5762-10

Competitiveness

Ultra-fast 3000 Mbps
vs. No (vendor C/A)

Smart antennas, zero coverage holes

180 mm, compact and elegant



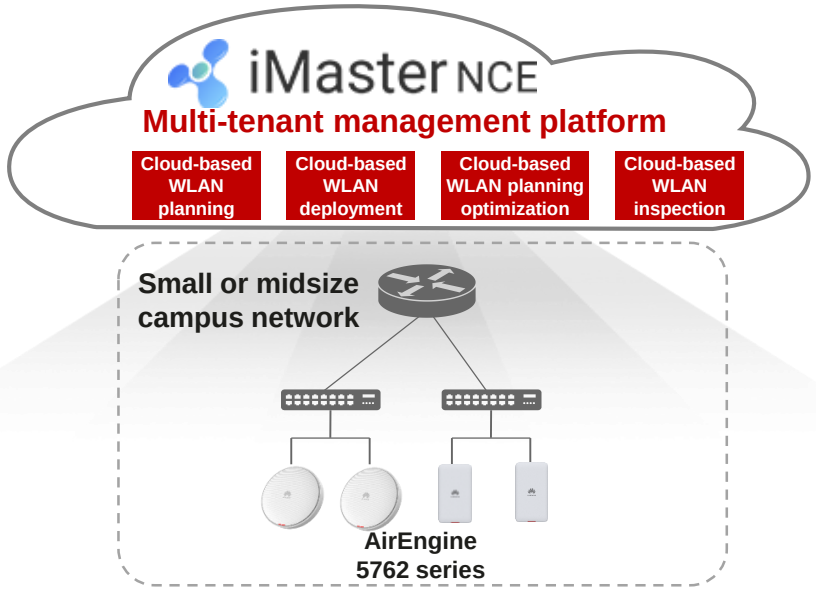
AirEngine 5762-17W

Ultra-fast 3000 Mbps
vs. No (vendor C/A)

Smart antennas, zero coverage holes

Abundant ports

MSP cloud Wi-Fi as the breakthrough point to expand the sales boundary



All-scenario coverage

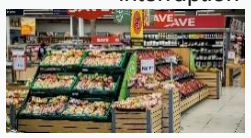
AirEngine series APs
Fully-wireless continuous networking, no rate limit for applications, zero service interruption

All-cloud management

NCE-Campus
Exclusive automatic network provisioning and policy deployment covering LAN and WAN

All-intelligent O&M

CampusInsight
AI-powered user, network, and application experience assurance and fault self-healing


Retail

Primary/Secondary education

Hotel

SME office

GTM of 6 New WLAN Models (3 Differentiators + 3 Cost-Effectiveness Models) with Assured Supply: Better Adapting to More Specific Scenarios

Wi-Fi 6 (802.11ax) indoor AP

AirEngine 8760-X1-PRO

- Device rate: 10.75 Gbps
- NSS: 4+12/4+8+4
- Built-in smart antennas
- BLE 5.0, two built-in IoT slots
- 2 x 10GE electrical + 10GE optical

AirEngine 8761-X1

- Device rate: 5.95 Gbps
- NSS: 4+8
- Built-in smart antennas
- BLE 5.0, USB external IoT module
- 1 x 10GE electrical + 1 x GE electrical

AirEngine 6760-X1

- Device rate: 10.75 Gbps
- NSS: 4+8/4+4+4
- Built-in smart antennas
- BLE 5.0, two built-in IoT slots
- 1 x 10GE electrical + 1 x GE electrical + 10G optical

AirEngine 6760-X1E

- Device rate: 10.75 Gbps
- NSS: 4+8/4+4+4
- External antennas
- BLE 5.0, two built-in IoT slots
- 1 x 10GE electrical + 1 x GE electrical + 10G optical

AirEngine 5760-51

- Device rate: 5.95 Gbps
- NSS: 4+4/2+2+4
- Built-in smart antennas
- BLE 5.0, two built-in IoT slots
- 1 x 5GE electrical + 1 x GE electrical

AirEngine 6761-21T

- Device rate: 6.58 Gbps
- NSS: 2+2+4
- Built-in smart antennas
- BLE 5.0
- 1 x 2.5GE electrical + 1 x GE electrical

AirEngine 6761-21

- Device rate: 3.55 Gbps
- NSS: 4+4
- Built-in dynamic-zoom smart antennas
- BLE 5.0
- 1 x 2.5GE electrical + 1 x 10GE optical

AirEngine 6761-21E

- Device rate: 3.55 Gbps
- NSS: 4+4
- External antennas
- BLE 5.0
- 1 x 2.5GE electrical + 1 x 10GE optical

AirEngine 5761-21

- Device rate: 5.38 Gbps
- NSS: 2+4
- Built-in smart antennas
- BLE 5.0
- 1 x 2.5GE electrical + 1 x GE electrical

AirEngine 5761-11

- Device rate: 1.77 Gbps
- NSS: 2+2
- Built-in smart antennas
- BLE 5.0
- 1 x GE electrical

AirEngine 5762-12

- Device rate: 2.98 Gbps
- NSS: 2+2
- Built-in smart antennas
- BLE 5.0
- 1 x GE electrical

AirEngine 5761-12

- Device rate: 1.77 Gbps
- NSS: 2+2
- Built-in smart antennas
- BLE 5.2, built-in dual IoT slots
- 2 x GE electrical

AirEngine 5762-10

- Device rate: 2.98 Gbps
- NSS: 2+2
- Built-in smart antennas
- 1 x GE electrical

NEW 23/03 Cost-effectiveness

Wi-Fi 6 (802.11ax) outdoor AP

AirEngine 8760R-X1

- Device rate: 10.75 Gbps
- NSS: 8+8/4+12
- Built-in smart antennas
- BLE 5.0, PoE out
- 1 x 10GE electrical + 1 x GE electrical + 1 x 10G SFP+

AirEngine 8760R-X1E

- Device rate: 10.75 Gbps
- NSS: 8+8/4+4+4
- External antennas
- BLE 5.0, PoE out
- 1 x 10GE electrical + 1 x GE electrical + 1 x 10G SFP+

AirEngine 6760R-51

- Device rate: 5.95 Gbps
- NSS: 4+4
- Built-in smart antennas
- BLE 5.0
- 1 x 5GE electrical + 1 x GE electrical + 1 x 10G optical

AirEngine 6760R-51E

- Device rate: 5.95 Gbps
- NSS: 4+4
- External antennas
- BLE 5.0
- 1 x 5GE electrical + 1 x GE electrical + 1 x 10 optical

AirEngine 5761R-11

- Device rate: 1.775 Gbps
- NSS: 2+2
- Built-in antennas
- BLE 5.0
- 1 x GE electrical + 1 x SFP

AirEngine 5761R-11E

- Device rate: 2.4 Gbps
- NSS: 2+2
- External antennas
- BLE 5.0
- 1 x GE electrical + 1 x SFP

Wi-Fi 7 (802.11be) indoor AP

NEW 23/09 Differentiator

AirEngine 8771-X1T

- Device rate: 18.67 Gbps
- Spatial stream: 4+4+4
- Built-in dynamic-zoom smart antennas
- BLE 5.2
- 2 x 10GE electrical port + 1 x 10GE optical port

WAC

AC6805

- Forwarding performance: 120 Gbps
- Maximum number of manageable APs: 6K
- Maximum number of access STAs: 64K

AirEngine 9700-M1

- Forwarding performance: 120 Gbps
- Maximum number of manageable APs: 2K
- Maximum number of access users: 32K

AC6508

- Forwarding performance: 10 Gbps
- Maximum number of manageable APs: 512
- Maximum number of access users: 4K

Wi-Fi 6 (802.11ax) wall plate AP

AirEngine 5761-12W

- Device rate: 1.77 Gbps
- NSS: 2+2
- Built-in smart antennas
- BLE 5.0, PoE out
- Uplink: 1 x GE electrical port Downlink: 4 x GE + 2 x RJ45 pass-through

AirEngine 5761-11W

- Device rate: 1.77 Gbps
- NSS: 2+2
- Built-in smart antennas
- BLE 5.0
- Uplink: 1 x GE electrical port Downlink: 4 x GE + 2 x RJ45 pass-through

AirEngine 5762-15HW

- Device rate: 2.98 Gbps
- NSS: 2+2
- Built-in smart antennas
- BLE 5.0
- Upstream 1 x 2.5GE optical or GE hybrid port
- Downlink 4 x GE

AirEngine 5762-13W

- Device rate: 2.98 Gbps
- NSS: 2+2
- Built-in smart antennas
- BLE 5.0
- Uplink 1 x GE electrical
- Downlink 1 x GE electrical

NEW 23/03 Cost-effectiveness

AirEngine 5762-16W

- Device rate: 2.98 Gbps
- NSS: 2+2
- Built-in butterfly-pattern smart antennas
- BLE 5.1, IoT expansion via USB
- 1 x GE electrical

AirEngine 5762-12SW

- Device rate: 2.98 Gbps
- NSS: 2+2
- Built-in smart antennas
- BLE 5.0
- Uplink: 1 x GE electrical
- Downlink: 1 x GE electrical

AirEngine 5762-17W

- Device rate: 2.98 Gbps
- NSS: 2+2
- Built-in smart antennas
- Uplink: 1 x GE electrical
- Downlink 4 x GE electrical

NEW 23/03 Cost-effectiveness

Wi-Fi 6 (802.11ax) agile distributed AP

10GE central AP
AirEngine 9700D-M1

- Forwarding performance: 40 Gbps
- Uplink: 4 x 10GE; downlink: 24 x GE
- Device management capability: 48 RUs
- Association of 4K STAs and concurrent access of 1K STAs

RU
AirEngine 5761-11WD

- Device rate: 1.77 Gbps
- NSS: 2+2
- Built-in smart antennas
- BLE 5.0
- Uplink: 1 x GE electrical; downlink: 4 x GE electrical + 2 x RJ45 pass-through

Wi-Fi 6 distributed Wi-Fi

NEW 23/09 Differentiator

DAP
AirEngine 9700D-S

- Theoretical rate: 10.75 Gbps
- 8 x hybrid port
- 4 x Wi-Fi SAM + 4 x IoT SAM
- Uplink: 1 x 10GE optical + 2 x 2.5GE electrical

NEW 23/09 Differentiator

ORU
AirEngine 5760-11DH

- 8 x SMA

Wi-Fi 6 (802.11ax) scenario-specific AP

AirEngine 5761-11EI

- Device rate: 1.77 Gbps
- NSS: 2+2
- Intrinsically safe, wide temperature range: –40°C to +70°C
- 2 x GE electrical + 2 x GE optical

AirEngine 6760-51EI

- Device rate: 4.8 Gbps
- Spatial stream: 4
- External antennas
- 1 x 5GE electrical + 1 x GE electrical + 1 x 10GE optical

Wi-Fi 6 CPE

- Device rate: 2.98 Gbps
- NSS: 2+2
- External antennas
- 4 x GE electrical

Huawei Provides All-Optical Transmission Network Portfolios

Solutions

ISP

Energy

Finance

Transportation

Government

Education

Products

Backbone DWDM Products

E9624: 10T Level Backbone DWDM MS-OTN Platform

E9612 / E9605: Super C All-optical Platform

Metro&Access DWDM Products

E6616/E6608: Large-capacity MS-OTN Compact Equipment

E6608T : Ultra-integrated and simplified All-optical Platform

Data Center Interconnect

DC908: Ultra broadband / High Integration / Intelligence
Date Center Interconnect Device

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Huawei End-to-End All-Optical Access Network Portfolio

ISP

Safe City

Electricity

Transportation

Education

Huawei All-Optical Access Network

EA5800 Series

First smart aggregation OLT with a distributed architecture in the industry

EA5801-GP08/GP16

Compact and low-density box-shaped OLT

EA5801s

10GPON ready outdoor compact blade OLT

OLT

SSC2802-TM-8 (8 ports)

SSC2811-SM-9U (8 ports)

SSC2811-SM-8 (8 ports)

Out-door

HUB BOX
Hubbox FDB2110SI-8M

SUB BOX
Subbox FDB2110SI-8

Hybrid Cable

In-door

New generation ODN solution with pre-connect, visualization and manageability

Digital Quick-ODN

EN800 /EG800 /K500/W600 Series **(Home ONT)**

Full-scenario WiFi 6

EN8145X6

EG8145X6

EG8145V5

K562E

EG8040H5

B800/B600 Series **(Private-line CPE)**

Enterprise Cloudification

B850G/B650G

B610

P800E/P600E Series **(POL ONU)**

Full-specifications

P813E

P812E

P613E

T800E/T600E Series **(Industrial ONU)**

Dedicated for industrial , high reliability

OptiXstar S892E

T863E

PowerCube500 (T672E-150G1)

ONU/ONT

HUAWEI

Intelligent Data Storage Portfolio

Data Management

Device Management

DeviceManager

Data Management Engine

DME

Intelligent O&M

eService

Intelligent Storage

All-Flash Storage & Backup Storage

OceanStor Dorado 18000

OceanStor Dorado 8000

OceanStor Dorado 6000/5000/3000/2000

OceanProtect

Hybrid Flash Storage

OceanStor 18500/18800

OceanStor 6800

OceanStor 5300/5500/5600/5800

OceanStor 2600

Mass Data Storage

OceanStor Pacific Series

OceanStor 9000

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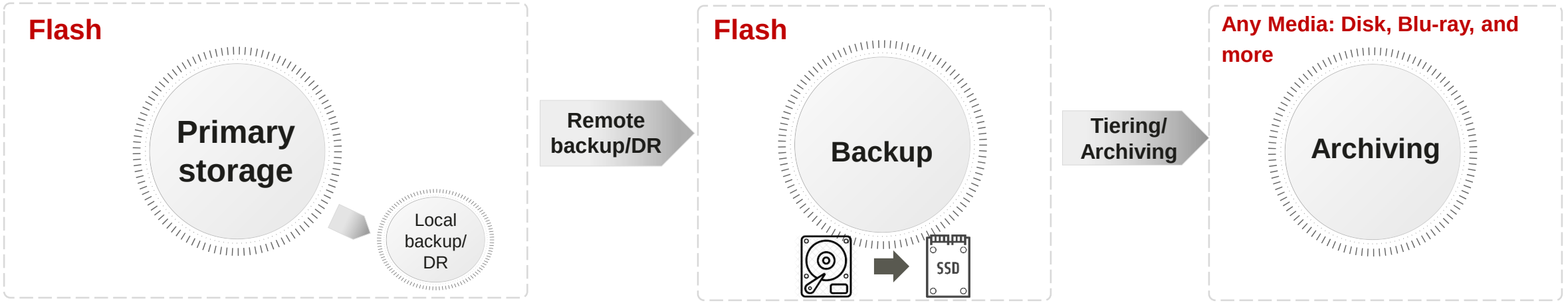
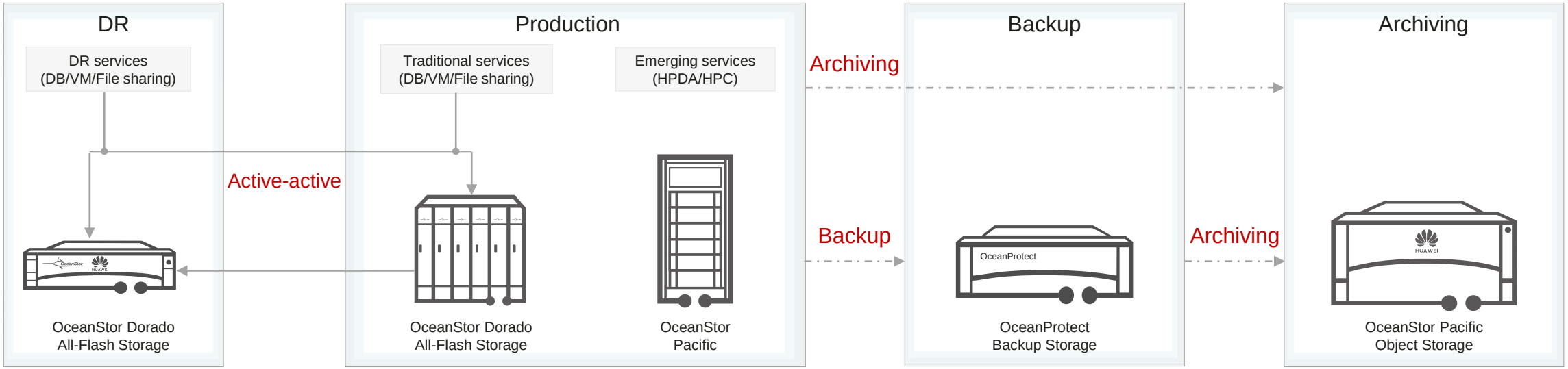
Storage: the Foundation of Data Centers

F2F2X: Flash To Flash To Anything





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Primary Storage: OceanStor Dorado All-Flash Storage

Industry Position: Leader in Gartner's Magic Quadrant, No.3 in the Global Storage Market Share

Gartner Magic Quadrant: Leader (2016 - 2021)

Interop Grand Prize

The Server & Storage category

INTEROP

A major event in global business technology that recognizes the most competitive products

Gartner Peer Insights Customers' Choice

Top 1 primary storage vendor

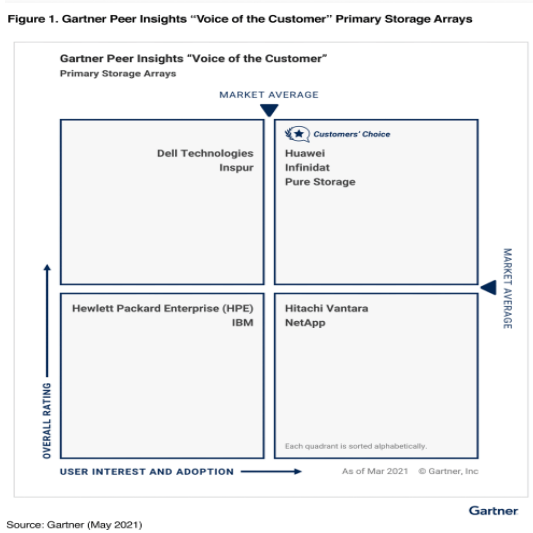


Figure 1. Gartner Peer Insights "Voice of the Customer" Primary Storage Arrays

Source: Gartner (May 2021)

Gartner

The world's most recognized IT research and consulting company that is considered as an authoritative source of objective technical thought leadership

Success stories

Global

Government

Justiça Federal, Brazil
Federal Board of Revenue, Pakistan
Algerian Tax Authority

Finance

Central Bank of Brazil
DBS Bank, Singapore
NCB, Saudi Arabia

Large enterprise

Sonatrach, Algeria
Yahoo, Japan
Saudi Aramco, Saudi Arabia

Europe

Government

Social Insurance Institution of Poland
Western Norway Regional Health Authority
Dutch Tax and Customs Administration

Finance

Widiba, Italy
İşbank, Turkey
Piraeus Bank, Greece

Large enterprise

Volkswagen, Germany
PSA Peugeot Citroën, France
Scania, Sweden

HUAWEI

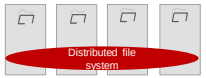
Cutting-Edge Solutions: Innovative E2E Acceleration Platform with the Highest Performance and Reliability of SAN & NAS in the Industry

E2E acceleration for premium performance

Full-mesh architecture: the only series in the industry that tolerates failure of seven out of eight controllers → **Always-on services**

nvm EXPRESS

Efficient protocols: E2E NVMe provides high performance. → **50% lower access latency**

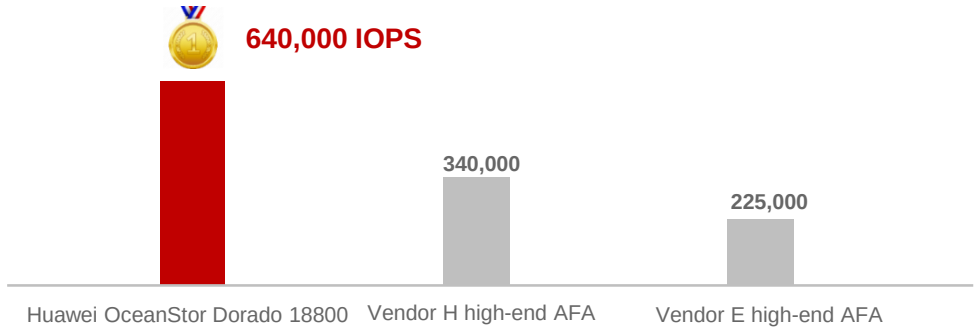


Distributed file system: Fully unleashes system capabilities. → **30% higher NAS performance**

FlashLink®

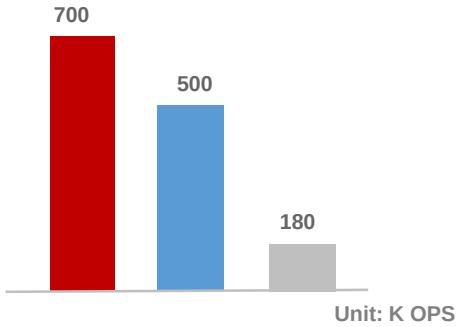
Algorithm acceleration: Intelligent algorithms collaborate with SSDs and controllers to maximize flash performance. → **20x faster data reconstruction**

High performance in database scenarios



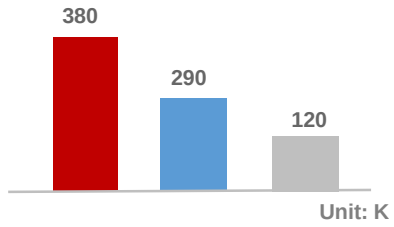
Test conditions: dual controllers, 7:3 read/write, 80% space occupied, data reduction enabled, 1 ms latency

40% higher in large files and small I/Os

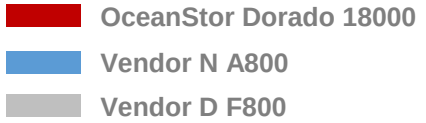


Test conditions: dual controllers, 512 20 GB large files, 8 KB small I/Os, 7:3 read/write

30% higher in small files and small I/Os



Test conditions: dual controllers, 40 million 8 KB small files, 5-layer directories, 8 KB small I/Os, and 7:3 read/write



HUAWEI

We respond to customers and partners quickly through Fast Track programs

Price : cost-effective

Select best-selling product models and set friendly prices based on customer requirements and historical prices to **provide more discounts to customers and partners**.

CISCO

20% price increase

VS

HUAWEI

Promotion

Sharing profits with customers/partners

Lead time : fast delivery

Supply chain collaboration: Suppliers prepare selected products at the same time. **Set a goods preparation baseline and implement rolling preparation of goods to shorten lead times.**

CISCO

12–16 weeks

Lead time during chip shortage

VS

HUAWEI

6 weeks

Normal lead time

2 weeks

Lead time during promotion

Respond quickly and meet requirements

Marketing : win-win results

Cooperate with partners to increase the scope and influence of those programs to **let them benefit more customers and partners**.

Expand the influence for win-win results

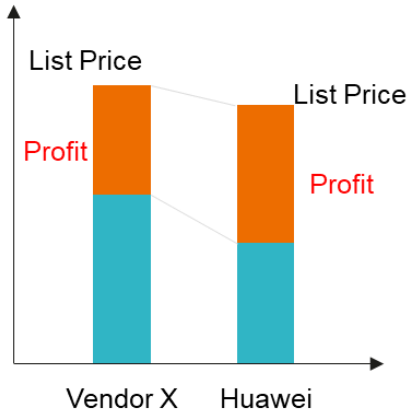
HUAWEI

Fast Track 3.0 Key Message

Theme	More Profit	More Opportunity	More Rapid

Key Value

More Profit



Lower List Price
+
Higher Discount
=
More Profit

Benefits

Based on 74 off from the main vendor.

➢ When less than 50K order.

5000 EUR case. 900 EUR more profit.

50K order. **9K more profit.**

➢ When between 50K and 100K order.

5000 EUR case. 1100 EUR more profit.

100K order. 9K+11K = **20K more profit.**

➢ When more than 100K order.

5000 EUR case. 1250 EUR more profit.

200K order. 9K+11K+25K = **45K more profit.**

More Opportunity

8 Datacom Scenarios
+
4 POL Scenarios
=
More Opportunity

More Rapid

➢ **Place orders easier.**

FT quotation in UniStar SCT directly. Place order without special approval.

➢ **Implementation management easier.**

CloudCampus APP configuration, Cloud management. No high-tech engineer is required.

➢ **Financing turnover faster.**

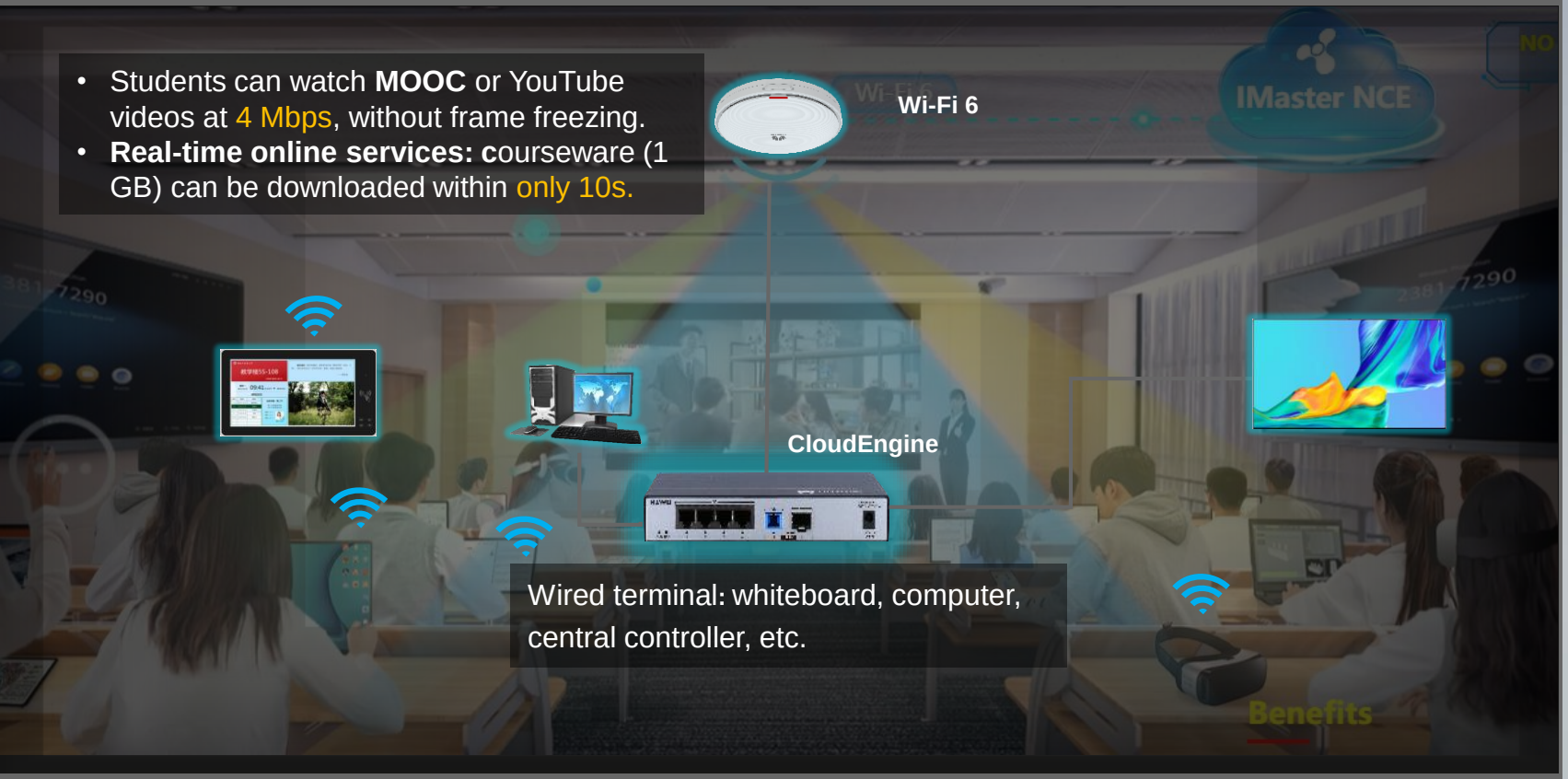
2 weeks Datacom delivery and **4 weeks** FTTH delivery.

Education: Smart Classroom

Fiber-to-The-desktop, Fan-Free and Quiet Design, and Interactive Teaching Anytime, Anywhere, Simplifying Learning

Hybrid teaching has become a new post-pandemic normal.

An average of 35 students in small classes can enjoy interactive teaching anytime anywhere.



- Students can watch **MOOC** or YouTube videos at 4 Mbps, without frame freezing.
- **Real-time online services: c**ourseware (1 GB) can be downloaded within only 10s.

Wi-Fi 6 AP

- 4 Mbps/user, 35 users in 1 classroom
- Device rate: 6.575 Gbps
- Smart antenna: coverage improved by 20%

Classroom Switch

- **Fiber**-to-the-desktop
- Fan-free design, natural heat dissipation, and super quietness
- Typical power consumption: **< 8 W**

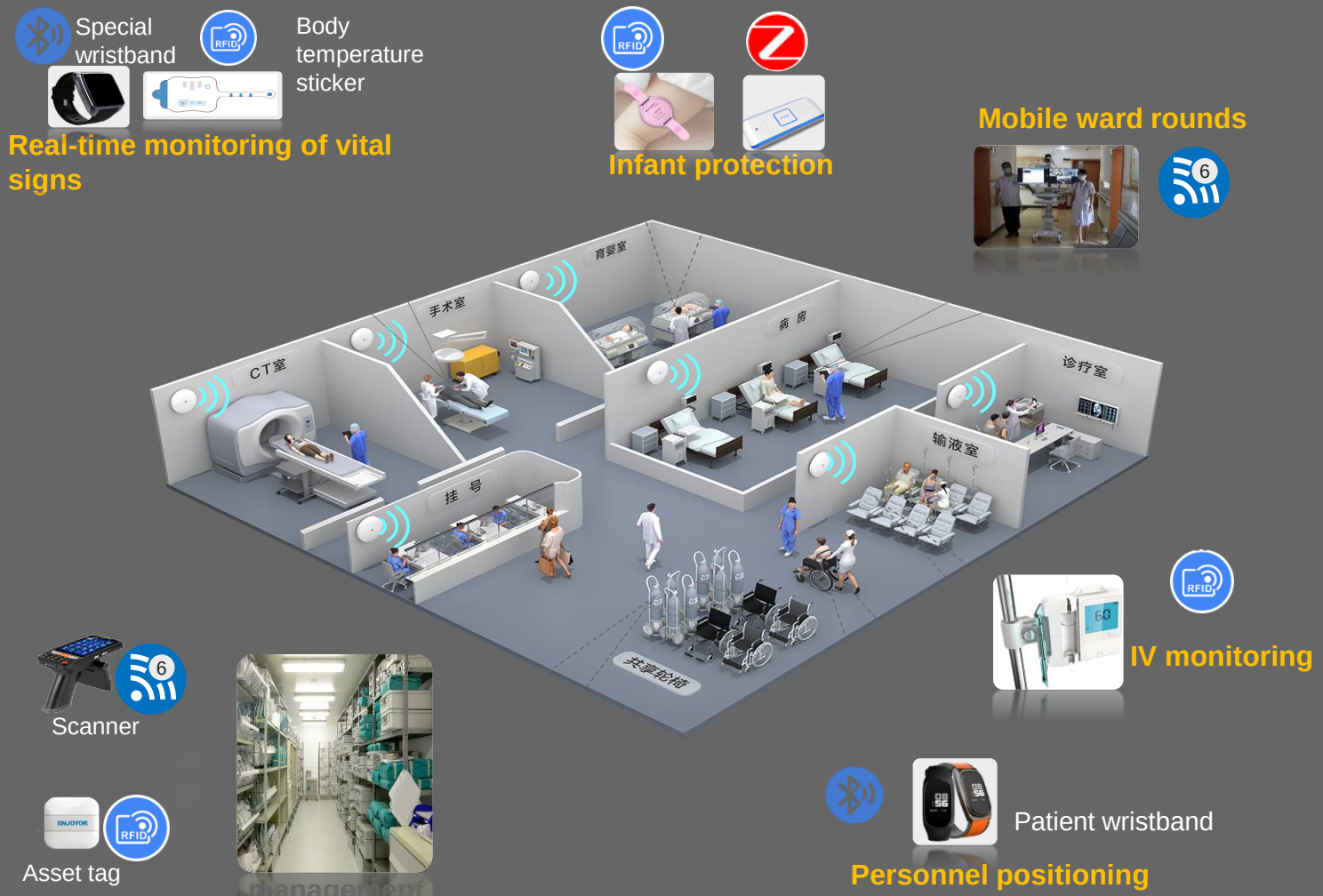
Product	Device Type	Remarks
Remote Unit	CloudEngine S5731-L-RU	Planning and configuration-free
	AirEngine Wi-Fi 6 AP	Built-in Smart Antenna
Access Switch	S5735-S/L-V2(PoE model)	PoE+/PoE++ for PD(AP,IPC)
Core Switch	S6730-H24X6C	

Healthcare IoT

Built-in IoT Card and Wi-Fi & IoT Convergence, Making Medical Services More Efficient

Multi-network convergence, improving healthcare service efficiency

- IoT is a must-have for smart hospitals, with a CAGR of 20% from 2020 to 2025.
- Independent construction of multiple networks results in high costs, poor signals, and difficult maintenance.



IoT-Converged AP

- **4-in-1,** supporting IoT modules and USB port for healthcare IoT expansion
- **Zero** interference thanks to RF coordination and channel avoidance

Wi-Fi 6 + Bluetooth + RFID + ZigBee

Product	Device Type	Remarks
Wi-Fi 6 AP	AirEngine5761-11/12	General indoor coverage
	AirEngine5761-11W/12W	Wi-Fi coverage in the ward
	AirEngine6761-21T	High-density scenario
Access switch	S5735-S-V2	Dual PS, 48*PoE+
Aggregation/Core	S6730-H	Native AC

Fully-Wireless Smart Retail

Fully-Wireless Coverage and Guaranteed Key Services Enable Digital Operations and Improve Store Efficiency

Retail price updates
Paper price updates once or twice per day, requiring 5 to 10 employees and taking 1 hour

Warehousing
Frequent AGV suspensions due to poor Wi-Fi roaming

Scanner-based stocktaking
Frequent disconnections due to discontinuous Wi-Fi coverage

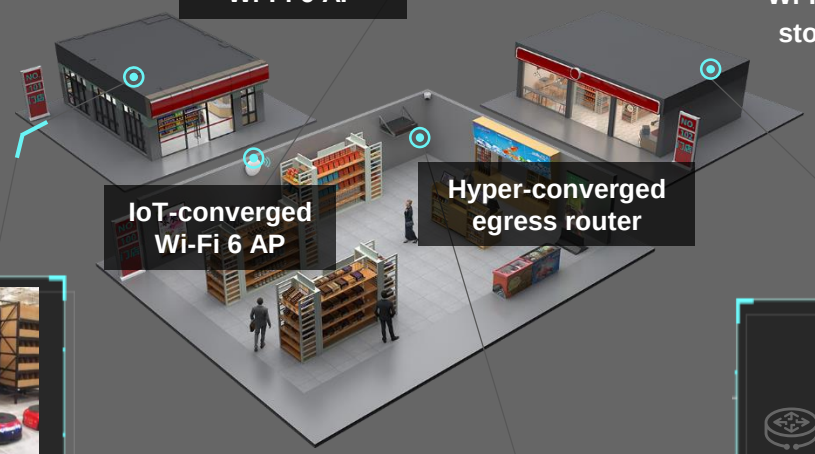
Branch interconnection
Lack of network assurance for key services

Electronic shelf label (ESL)

Wi-Fi and IoT convergence: fast ESL updates in 1 minute

Stocktaking

Wi-Fi access for scanners: fast stocktaking by 1 employee in just 2 hours *

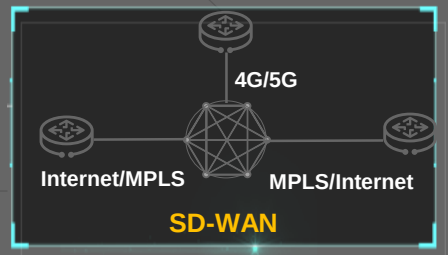


AGVs @ automated warehousing

300 concurrent AGVs in 1000 m²

AGV speed: 5 m/s

Branch interconnection



SD-WAN dual-link intelligent traffic steering for assured key services

ESL & Stocktaking

- Built-in dual PCIe slots for IoT cards, **flexible IoT expansion**
- Smart antenna, achieving **zero wireless coverage** hole and improving the coverage range **by 20%**

AGVs @ Automated Warehousing

- **Triple-radio design, 40 terminals per AP, high-density access**
- Lossless roaming, AGV operations at **full speed**, **zero service interruptions**

Branch Gateway

- Hybrid uplinks: **cabling-free 4G/5G for remote areas**
- **3-in-1:** integrating switching, routing, and security

Product	Device Type	Remarks
Wi-Fi 6 AP	AirEngine 5761-12	PCIe for IoT Application
	AirEngine 5761-11/21	Economical AP
Access Switch	S5735-S/L-V2(PoE model)	PoE+/PoE++ for PD(AP,IPC)
Access Router	NetEngine AR651	

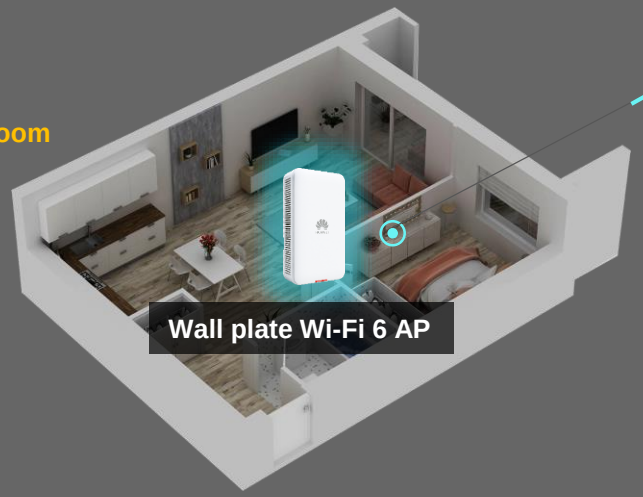
Fully-Wireless Digital Hotels

Fully-Wireless Coverage, High-Speed Internet Surfing, and Ultimate Customer Satisfaction

89% of guests choose hotels based on Wi-Fi experience

90% of hotels prefer ubiquitous Wi-Fi coverage

Guest room

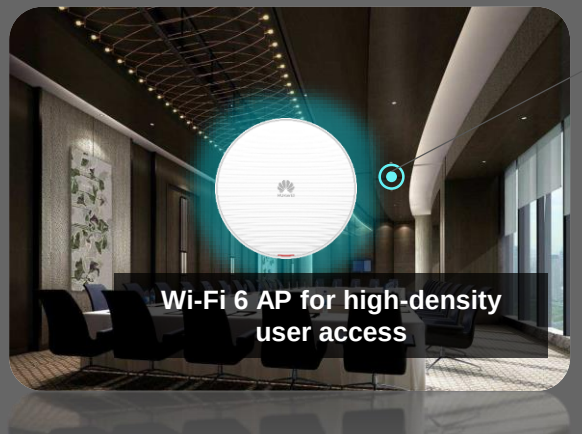


No wireless coverage holes

Superfast video download in seconds

AP speed (with only one terminal): 945 Mbps

Conference room



High-density wireless access, assured conference experience

250 users per AP, **> 4 Mbps** bandwidth per user

Wall Plate Wi-Fi 6 AP

- Smart antennas: **20%** greater coverage range, 1 AP for a 40 m^2 room
- PoE+ support, **ensuring power supply to downstream IP phones**

Wi-Fi 6 AP for High-Density User Access

- Triple-radio design: **6.75 Gbps** rate*, 4K HD video, 250+ concurrent users supported
- Intelligent multimedia scheduling: **interruption-free** audio and video services

Product	Device Type	Remarks
Wi-Fi 6 AP	AirEngine5761-11/21	Corridor coverage
	AirEngine5761-11W/12W	Guestroom Panel AP Coverage
	AirEngine 6760R-51	Resort Outdoor Coverage
Access switch	S5731-S M-GE(PoE model)	90W Poe++, 1/2.5/5/10Gbps
Aggregation/Core	S6730-H	Native AC

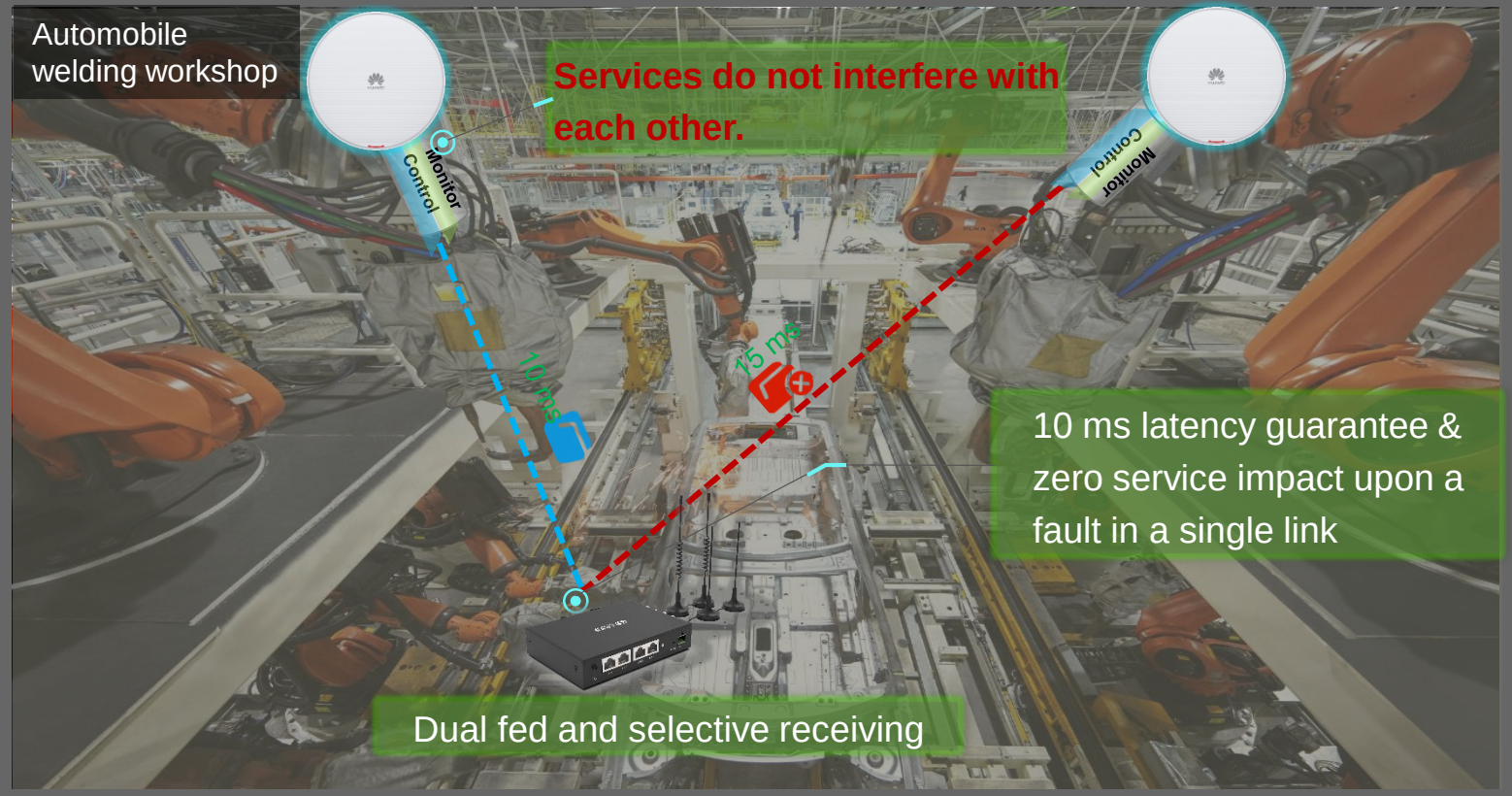
Fully-Wireless, Intelligent Manufacturing Network

Equipment on the Production Line Goes Wireless, Creating 12 More Days of Production Per Year

Long wired cables are **easily damaged** due to frequent movement, resulting in unplanned downtime of **30 to 60 min per cable, per month.**

Replacing a large number of long wired cables incurs high labor and material costs: US**$150 to US$300 per cable, per month.**

In a typical welding workshop with about 500 robotic welding torches, the cable replacement expenses are over **US$1.8M/year.**



Wi-Fi 6 CPE & AP

- **Air interface slicing**: bandwidth reservation and fixed latency capabilities for specific services through dedicated slicing queues
- **Dual fed and selective receiving**: Redundant links and the "first come, first served" policy optimize packet loss and latency during transmission.
- **Wi-Fi 6 CPE**: unique in the industry, 10 ms E2E latency, meeting factory automation requirements and achieving 4x better concurrency than Wi-Fi 5

Wi-Fi 6 CPE

Product	Device Type	Remarks
Wi-Fi 6 AP	AirEngine 6761-21/21T	Built-in Smart Antenna
	AirEngine Wi-Fi 6 CPE	
Access switch	S5735-S/L-V2(PoE model)	24/48*GE PoE+ ports
Aggregation/Core	S6730-H(Optical Model)	

POL Accelerating Digital Education

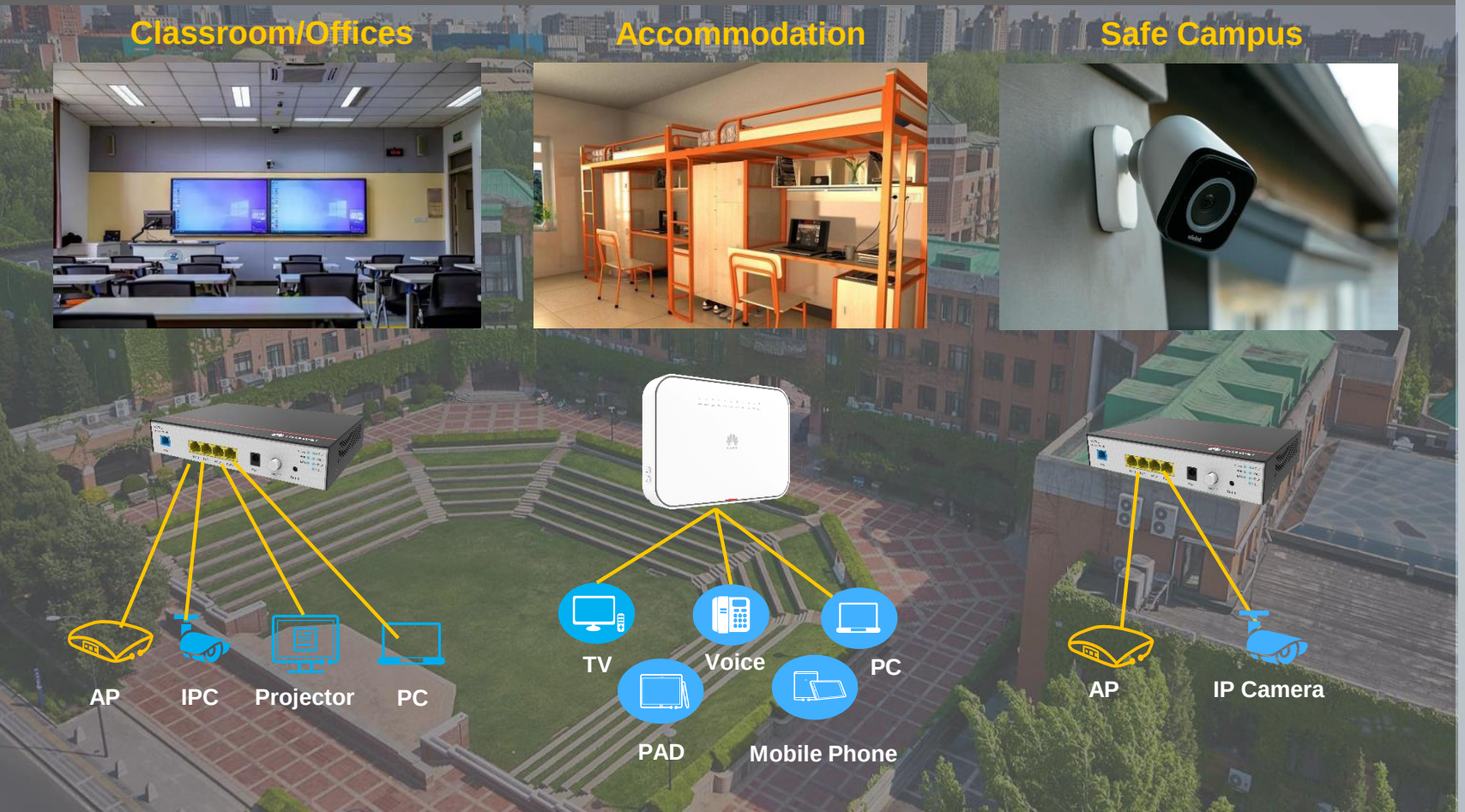
Challenges

- Cloud education and E-learning demand reliable networks that can support large bandwidths and smooth volution.
- Campuses require full Wi-Fi coverage, uniform wired/wireless authentication, and seamless roaming.
- Campuses need cloud desktops, uniform bearing for multi-service, and simplified network planning, cabling, and O&M.

Classroom/Offices

Accommodation

Safe Campus



Solution Highlights

- **100Mbps @ Everywhere.** Wi-Fi6 powered by full fiber backhaul for 100M connection.
- **1 Terminal @ 1 Room.** All-in-one CPE: Integrates with POTS, HSI, CCTV, Wi-Fi.
- **1 Day Service Ready.** Terminal Plug-and-Play, one-click service provisioning.

PoE ONU

Wi-Fi 6 ONU

Product	Model	Remark
OLT	EA5801-GP04	4*GPON port
ONU	W626E	4*GE+1*POTS+2.4G/5 G Wi-Fi 6+1USB
	P612E	4*GE(PoE/PoE+)
Switch	S5731-H24T4XC	24*GE

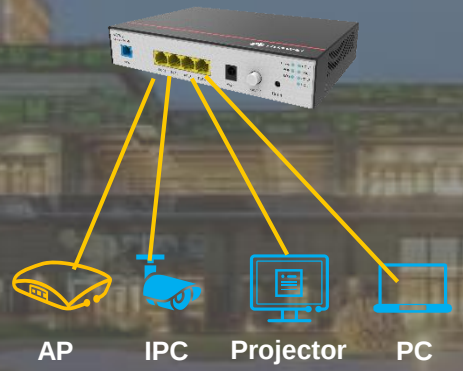
POL Provides Simple, Reliable & Flexible Hotel Networks

Challenges

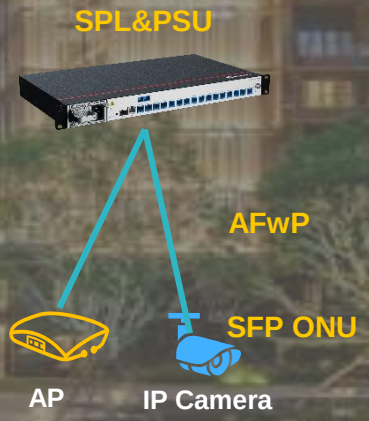
- Multiple cables per room. The deployment is complex, incurring many fault points.
- Overlapped networks cause increasing maintenance costs and difficult transformation.
- The power consumption of many devices and air conditioners is high, resulting in high OPEX.

Guest Room

Office/Meeting Room



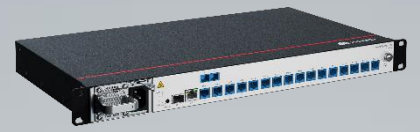
Public Area/Lobby



Solution Highlights

- **Best TCO.** ~30% CAPEX & OPEX Saving.
- **1 Fiber for 1 Room.** Smart hotel service: POTS, HSI, CCTV, Wi-Fi, RCU.
- **Wi-Fi "0" Interruption.** Wi-Fi 6 L2 / L3 seamless roaming, the best experience.

PSU
(Power Supply Unit)



AFwP
(Advanced Fiber with Power)

SFP ONU

Product	Model	Remark
OLT	EA5801-GP04	4*GPON port
ONU	W626E	4*GE+1*POTS+2.4G/5G Wi-Fi 6+1USB
	P612E	4*GE(PoE/PoE+)
Switch	S5731-H24T4XC	24*GE

POL Improves Airports Service and Experience

Challenges

- Complex network management.
- Service security control.
- Slow provisioning of new services.
- Long-distance coverage.
- Outdoor scenarios.

Solution Highlights

- **Up to 40km Coverage**, Reduces 80% ELV equipment room. Improves deployment efficiency by 60%.
- **Ultimate Wi-Fi Experience**, Wi-Fi 6 100M anywhere, high concurrency, and VIP user experience assurance.
- **Smart O&M**, Visualized full journey experience of each client at every moment.

Industry ONU

Outdoor ONU
(integrated site)

Product	Model	Remark
OLT	EA5800-X2	32*GPON port
ONU	W626E	4*GE+1*POTS+2.4G/5 G Wi-Fi 6+1USB
	T863E	Outdoor ONU
	P612E	4*GE(PoE/PoE+)
Switch	S5731-H24T4XC	24*GE

K562, Extend Wi-Fi Coverage for Home network

Huawei OptiXstar K562 is a **dual-band edge ONT** that supports gigabit access over both **Wi-Fi 6** and Ethernet gigabit network ports.

- ✓ Embedded AI (eAI) acceleration for value-added services, such as online games, online education, and teleconference
- ✓ Next-generation Wi-Fi 6 MU-MIMO technology
- ✓ VR/4K over Wi-Fi
- ✓ 160 MHz channel width
- ✓ Strong anti-interference capability, wide coverage, and network self-healing
- ✓ One-click pairing and automatic networking
- ✓ Ethernet port auto-sensing for LAN or WAN mode
- ✓ Mesh network (tree type)
- ✓ Remote management, installation and maintenance APP management, and user APP management

Distribution Scenario

OptiXstar K562

Wi-Fi 6 Edge ONT

Interface	NNI: Wi-Fi or GE UNI: ● Wi-Fi uplink: 3GE + 2.4GHz&5GHz Wi-Fi 6 ● GE uplink: 2GE + 2.4GHz&5GHz Wi-Fi 6
Antenna type	6 internal antennas
Supported Protocol	IEEE 802.11 ax (2.4GHz&5GHz)
Others	WMM(Wi-Fi Multimedia); Beamforming; Band steering;1024-QAM, 160 MHz channel width, WPA3, and DL MU MIMO

MiniFTTO Solution Introduction and Target Scenarios

Distribution Scenario

SME office

Number of users: 10–100
Building characteristics: single-floor or multi-floor, large open areas + multiple compartments
Typical users: SMEs in independent office buildings

Convenient Stores

Number of users: 20-100
Building characteristics: single-story building, dense population, and large burst traffic
Typical users: chain convenience stores and supermarkets

Warehouse

Number of users: 20–100
Building characteristics: single layer, dense personnel, and large burst traffic
Typical users: logistics warehouse, storerooms

Commercial Villa

Number of users: 5–30
Building characteristics: multi-floors + multi-rooms, dense personnel, and a large number of terminals
Typical users: medium and large villas, live video streaming

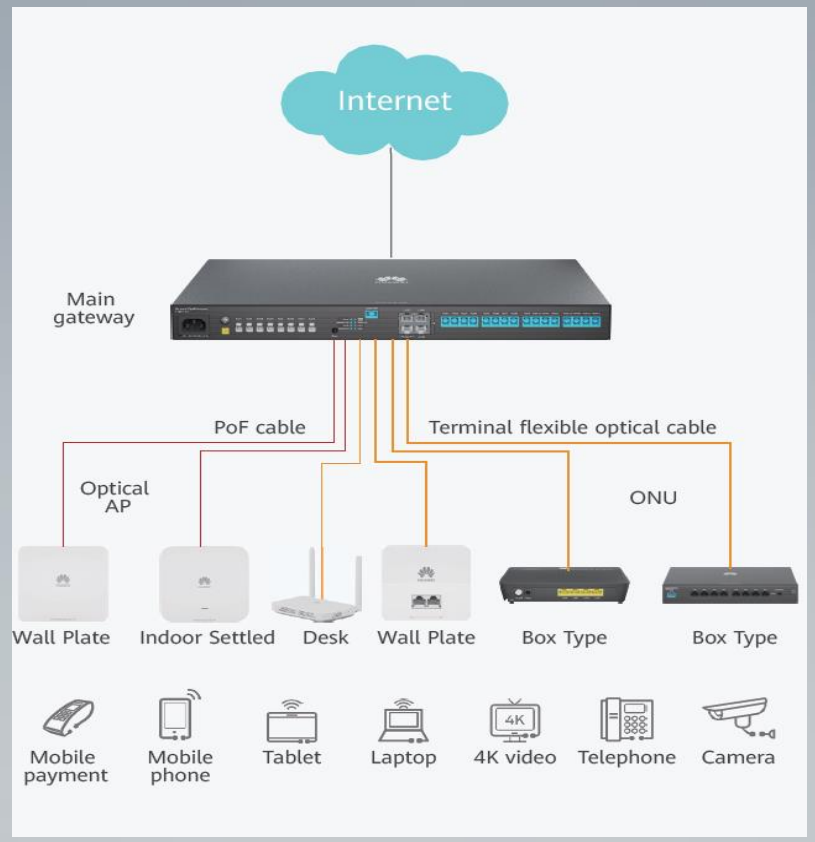
Express Hotel

Number of users: 20–100
Building characteristics: multi-store and multi-room, dense rooms, high requirements for real-time video backhaul
Typical users: E-sports hotels, Express hotels

Preschool Education

Number of users: 30–100
Building characteristics: 2-3 floors, no more than 10 rooms on each floor
Typical users: kindergartens, training institutions

MiniFTTO Network



Solution Value:

- ✓ Superior Experience
  - Seamless Roaming
  - High Concurrency
  - Large Bandwidth
- ✓ Simplified Deployment
  - Plug and Play
- ✓ Easy O&M
  - WebGUI Management, NMS free

Thank you.

把数字世界带入每个人、每个家庭、
每个组织，构建万物互联的智能世界。

Bring digital to every person, home and
organization for a fully connected,
intelligent world.

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