

BCX  HUAWEI

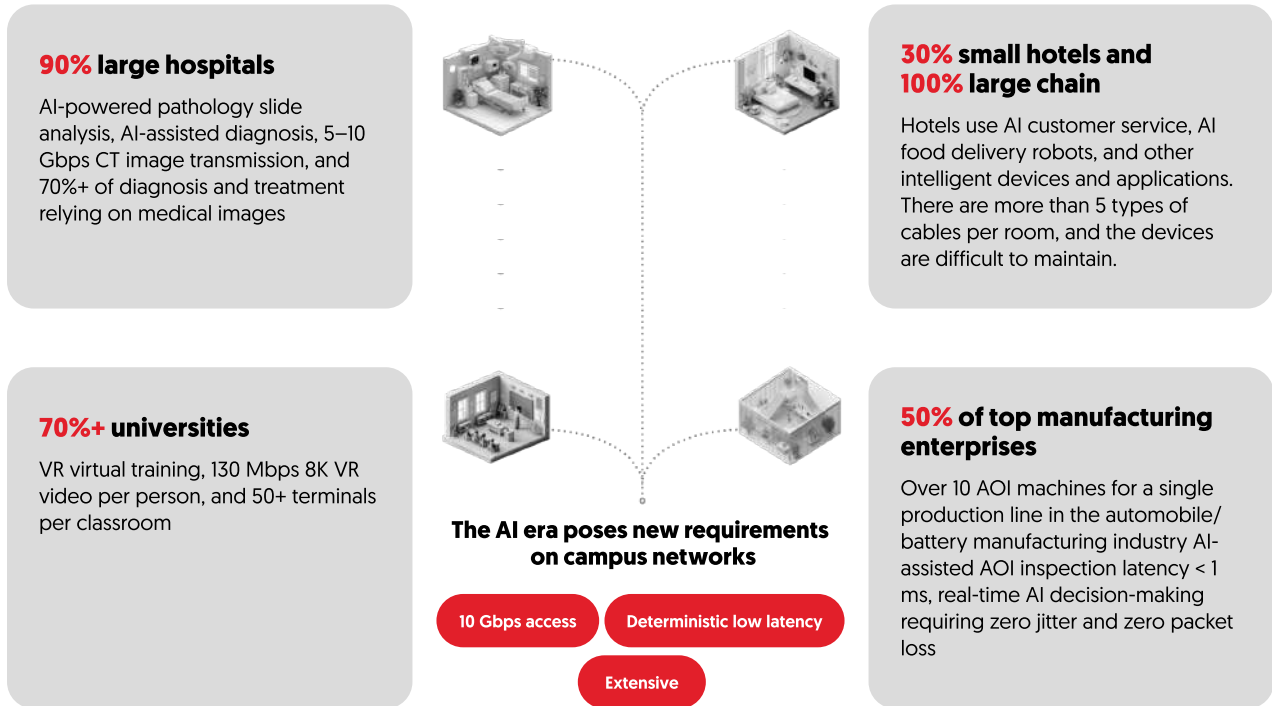
iFTTO Solution

Redefining Campus Network
Value and Building a New
Smart Campus Ecosystem



Requirements and Challenges

AI Adoption Is Accelerating Across Industries, Bringing New Challenges to Campus Networks



AI-driven campus: Physical space > Digital space

Digital twin is the common choice for intelligent transformation of global top enterprises. Microsoft Azure Digital Twins - IoT twin platform Siemens Xcelerator - industrial control twin platform

Smart healthcare: Falls are the second largest cause of accidental death worldwide. Privacy protection has given rise to non-visual solutions to detect accidental falls of patients and the elderly.

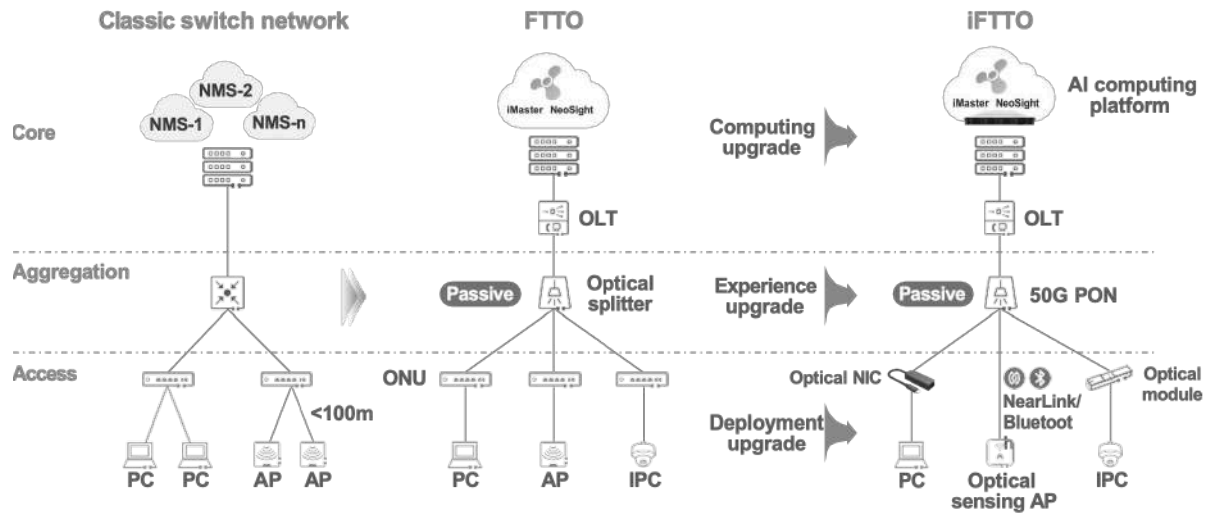
Smart education: AI-assisted teaching evaluation, learning analysis, and homework grading provide decision-making basis for campus administrators.

FTTO Solution Generation Upgrade

Wi-Fi 7 ramp-up in campuses
Copper wire -> optical fiber | Mbps > Gbps > 10Gbps

AI app acceleration
Connected terminals -> IoT sensing | Network > IoT > Sensing

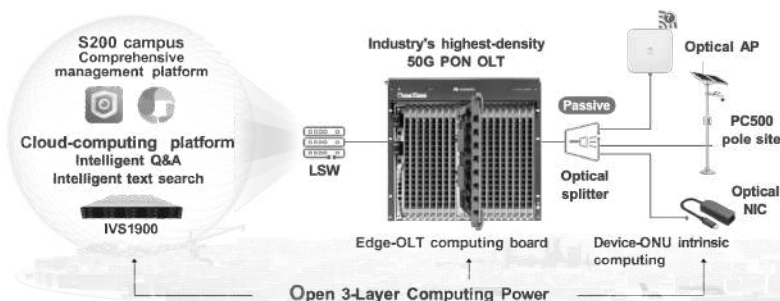
FTTO for fiber-in and copper-out in 2025 -- iFTTO for inclusive AI in 2026



Architecture transformation
Active > passive | 3-layer > 2-layer | GE > 10GE

Smart transformation
Connectivity > Sensing | Communication > IoT Manual management > Intelligent O&M

iFTTO redesigns O-N.E.X.T campus network value



Education

- Energy-saving
- Intrusion detection

Healthcare

- AI pathology analysis
- Fall detection

Hotel

- Energy saving
- Prevention of unregistered guest frauds

Manufacturing

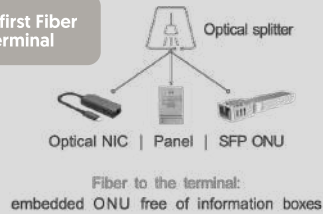
- AOI quality inspection
- Security control

Key capabilities and benefits

Network Unified by Optical

Smooth evolution in 30 years

Industry's first Fiber to the terminal



NEW

Industry's highest-density triple-mode integration 16-port 50G PON board

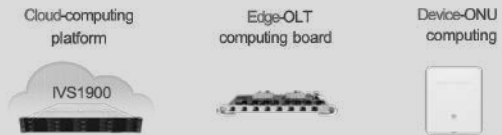
NEW

OptiXstar P992H
Industry's first 50G PON ONU
Digital pathology and Wi-Fi 7 partner

50G to the room: Upgrade without re-cabling
future-proof for 30 years

Ecosystem of Open IoT

Unified network construction reduces TCO



Cloud-edge-device 3-layer computing collaboration
accelerating AI response to milliseconds

NEW

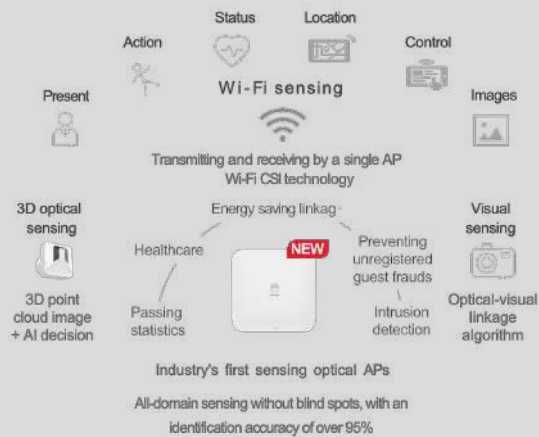
Industry's first Converged IoT optical AP



Three networks -> One network, unified management
reducing network construction TCO by 30%

X-Dimensional Sensing

Enabling new AI applications



Towards Network Self-driving

80% of faults automatically resolved

Industry's first intelligent O&M agent for all-optical campus
enabling deskilled O&M



F&E (FTTO Agentic Engine)

- Drawing analysis: AI-based image parsing, identifying rooms and data points
- Network planning: automatic ONU selection, deployment, and cabling
- Quality simulation: Wi-Fi coverage heatmap
- Investment estimation: cost comparison of multiple solutions

FTTO Planner



AI-based CAD parsing, automatically producing
planning reports and BOQs

Success Cases

Education: Khon Kaen University



Khon Kaen University is a renowned university in northeast Thailand:

- More than 40 000 students
- Cover an area of 3.3 million m²

Full-scenario application, including dormitory rooms, offices, research rooms and electronic classrooms.

Solution & Benefits

Reduce OPEX

Reduce power consumption, reduce cost in O&M.

Reduce CAPEX

30% less cost in cabling, **30%** less cost in capex.

Business Campus: Dubai Creek Harbor

A smart community known as '**City of the Future**' Sustainable infrastructure



Solution & Benefits

Passive optical network, power consumption **30%↓**

Carbon emission **62 tons/year↓**

Wide coverage, 40 km ultra-long haul transmission

Full coverage @ **10 Gbps**

Hotel: Orizzonte Village Italy



Orizzonte Village is a tourist resort in Tuscany, Italy.

- 600 guest rooms
- Smart hotel networks

Full-scenario application, including guest rooms, front desks and public areas

Solution & Benefits

Fiber to the room, TV | Phone | Wi-Fi 6
Guest experience **20x↑**

Passive optical network, carbon emissions
6 500 kg↓ ≈ Planting **300 trees**

Hospital: Shenzhen Nanshan District People's Hospital

A famous hospital in Shenzhen, China
Smart healthcare networks



Solution & Benefits

Fiber to the CT machine, symmetric **10 Gbps**
Image reading efficiency **1 000 images/second**

Passive optical network, O&M nodes **60%↓**
Number of faults **432/year → 2/year**

Huawei iFTTO Product Introduction

Huawei OptiXaccess OLT Series

EA5800-X17



17 service slots
UNI Type:

50G PON/GPON/XG[S]-PON/
XGS-PON&GPON Combo/GE/10GE

EA5800-X15



15 service slots
UNI Type:

50G PON/GPON/XG[S]-PON/ XGS-
PON&GPON Combo/GE/10GE

EA5800-X7



7 service slots
UNI Type:

50G PON/GPON/XG[S]-PON/
XGS-PON&GPON Combo/GE/10GE

EA5800-X2



2 service slots
UNI Type:

GPON/XG[S]-PON/
XGS-PON&GPON Combo/GE/10GE

EA5801E- GP16



Box-shaped OLT
UNI: 16 x GPON

EA5801E- GP08



Box-shaped OLT
UNI: 8 x GPON

Huawei OptiXstar ONU Series

P612L



NNI: GPON
UNI: 4 x GE, Support PoE/PoE+

P613E-E



NNI: 2 x GPON
UNI: 8 x GE, PoE/PoE+

P613E-L1



NNI: GPON
UNI: 8 x GE, Support PoE/PoE+

P803L



NNI: XGS-PON
UNI: 8 x GE

P813L



NNI: XGS-PON
UNI: 8 x GE, Support PoE/PoE+

P882E



NNI: XGS-PON
UNI: 4 x GE + 1 x 2.5GE, Support PoE/PoE+

P813E-E



NNI: 2 x XGS-PON
UNI: 8 x GE, PoE/PoE+

P815E-L1



NNI: 2 x XGS-PON
UNI: 24 x GE, PoE+

P885E-10



NNI: 2 x XGS-PON Pro/XGS-PON
UNI: 24 x 2.5GE, PoE/POE+/POE++

P893E

NNI: 2 x XGS-PON Pro [BOB+SFP], compatible with XGS-PON
UNI: 4 x GE + 4 x GE [PoE+] + 2 x XGE [PoE++]

P883E

NNI: XGS-PON Pro [BOB], compatible with XGS-PON
UNI: 2 x GE + 6 x GE [PoE+] + 2 x 2.5GE [PoE+]

P884E

NNI: 2 x XGS-PON Pro, compatible with XGS-PON
UNI: 8 x GE + 4 x GE [PoE+] + 4 x 2.5GE [PoE+]

P883H

NNI: 2 x XGS-PON Pro [BOB+SFP], compatible with XGS-PON
UNI: 8 x 2.5GE [PoE+]

P885E

NNI: 2 x XGS-PON Pro [BOB], compatible with XGS-PON
UNI: 24 x 2.5GE, Support PoE+

M990

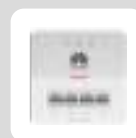
NNI: Symmetric 50G PON
UNI: 2 x 25GE/XGE/GE [optical] + 2 x XGE/GE [optical/electrical] + 2 x GE [electrical] + 2 x clock ports

***P992H NEW**

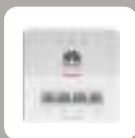
NNI: 50G-PON
UNI: 4 x 10GE [PoE++]

P602P NEW

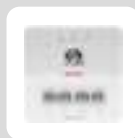
NNI: GPON U
NI: 4 x GE
Power supply: AC

P602P-01 NEW

NNI: GPON
UNI: 4 x GE,
Power supply: PoF

P802P NEW

NNI: XGS-PON
UNI: 4 x GE
Power supply: AC

P802P-01 NEW

NNI: XGS-PON
UNI: 4 x GE
Power supply: PoF

P892M-01

NNI: XGS-PON
UNI: 4 x GE [PoE+] + 1 x 10GE [PoE++]

P892M-02

NNI: XGS-PON
UNI: 4 x GE [PoE+]

S800E

NNI: XGS-PON
UNI: 1 x GE/2.5GE/5GE/10GE

Huawei OptiXstar Optical AP Series

W626E-10

NNI: GPON
UNI: 1 x POTS + 4 x GE + 1 x USB 2.0 + 2.4GHz&5GHz Wi-Fi 6
Power supply: Power adapter

W627E

NNI: GPON
UNI: 4 x GE + 1 x POTS + 1 x USB 2.0 + 2.4GHz&5GHz Wi-Fi 7
Power supply: Power adapter

W627E-01

NNI: GPON
UNI: 4 x GE + 1 x POTS + 1 x USB 2.0 + 2.4GHz&5GHz Wi-Fi 7
Power supply: PoF

W827E-30 NEW**NNI:** XGS-PON**UNI:** 8 x GE + 1 x POTS + 2.4GHz&5GHz Wi-Fi 7**Power supply:** Power adapter**W827E-31** NEW**NNI:** XGS-PON**UNI:** 8 x GE + 1 x POTS + 2.4GHz&5GHz Wi-Fi 7**Power supply:** PoF**W817C****NNI:** XGS-PON**UNI:** 1 x GE + 2.4GHz&5GHz Wi-Fi 7**Power supply:** PoE/PoF**W617T****NNI:** GPON**UNI:** 1 x 1GE + 2.4GHz&5GHz Wi-Fi 7**IP rating:** IP68**Operating temperature:** - 40 °C to + 65 °C**Power supply:** PoE**W817T****NNI:** XGS-PON**UNI:** 1 x 1GE + 2.4GHz&5GHz Wi-Fi 7**IP rating:** IP68**Operating temperature:** - 40 °C to + 65 °C**Power supply:** PoE***W857I** NEW**NNI:** XGS-PON Pro**UNI:** 1 x 2.5GE + 2.4GHz[3 x 3 MIMO] + 5GHz[3 x 3 MIMO, Low Band] + 5GHz[3 x 3 MIMO, High Band] Wi-Fi 7 + 1 x USB2.0 + Bluetooth***W817I** NEW**NNI:** XGS-PON**UNI:** 1 x GE+2.4GHz&5GHz [2 x 2 MIMO] Wi-Fi 7 + Bluetooth + NearLink**W827E-10****NNI:** XGS-PON**UNI:** 4 x GE + 1 x POTS + 1 x USB 2.0 + 2.4GHz&5GHz Wi-Fi 7**Power supply:** Power adapter**W827E-11****NNI:** XGS-PON**UNI:** 4 x GE + 1 x POTS + 1 x USB 2.0 + 2.4GHz&5GHz Wi-Fi 7**Power supply:** PoF**Huawei ODN****Indoor Flat Hybrid Cable-L****Fiber count:** 1**Cable diameter:** 1.8 mm x 4.2 mm**Fiber type:** G.657A2**Rated operating voltage/current:** 56 V/0.5 A**Conductor diameter:** 0.48 mm [7 mm x 0.16 mm]**Cable length:** 1000 m/drum**Indoor Single-end Hybrid Cable****Fiber count:** 1**Cable diameter:** 2.2 mm x 5.3 mm**Fiber type:** G.657A2**Rated operating voltage/current:** 60 V/2 A**Connector type:** SC/UPC hybrid connect**Insertion loss:** Max. 0.30 dB**Cable length:** 2 m**Indoor Round Hybrid Cable-S****Fiber count:** 1**Cable diameter:** 4.3 mm**Fiber type:** G.657A2**Rated operating voltage/current:** 56 V/2.3 A**Conductor diameter:** 0.93 mm [7 mm x 0.31 mm]**Cable length:** 1000 m/drum

Indoor Flat Hybrid Cable-H



Fiber count: 1
Cable diameter: 2.2 mm x 5.3 mm
Fiber type: G.657A2
Rated operating voltage/current: 60 V/2 A
Conductor diameter: 1.17 mm [7 mm x 0.39 mm]
Cable length: 1000 m/drum

OptiXaccess-S1016-L



Dimensions (H x W x D): 1 U x 482 mm x 255 mm
Function: Power supply unit of PoF cables
Maximum capacity: 16 PoF ports, maximum output power of each port: 90 W, one built-in 2:16 optical splitter

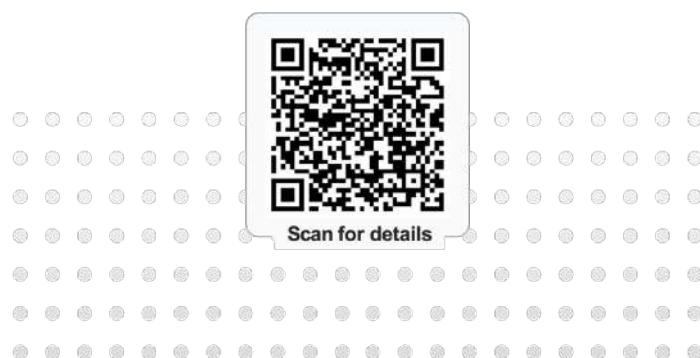
Network Management



NeoSight offers a comprehensive solution. Through centralized management, visualized monitoring, intelligent analysis, and other functions, NeoSight enables enterprises to enhance their O&M efficiency, reduce O&M costs, optimize resource efficiency, and ensure the stable operation of their ICT systems.

Roadmap products marked with an asterisk (*) are expected to be released in Q3 2026.





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