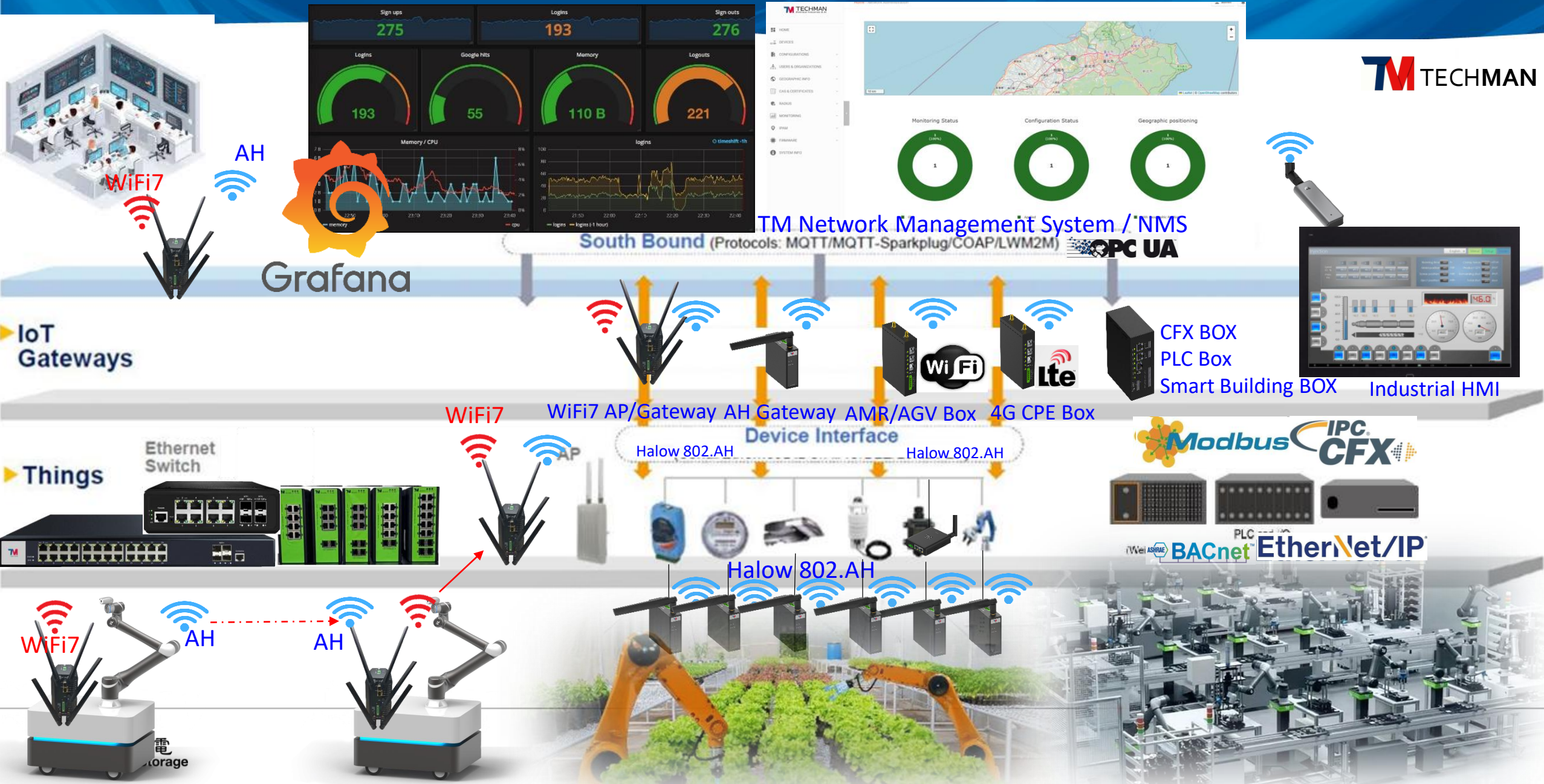


# WiFi 7 & AIoT Product Roadmap

<https://www.tm-conn.com/>



# TM IoT Architecture – WiFi7 & WiFi Halow 802.11ah total solution



# Industrial Wireless Connectivity Family

High Performance. Long Range. Easy Integration.

From High-Speed Backbone to Long-Range IoT Access – A Complete Wireless Solution for Every Industrial Need.

## IW-3240H

### Wi-Fi 7 Industrial Edge Gateway

- Wi-Fi 7 + IEEE 802.11ah dual radio
- Wi-Fi 7 | high throughput
- 2.4 / 5 GHz + Sub-1 GHz
- 10G SFP+ backbone
- IEEE 802.11ah Long-range coverage
- High reliability & redundancy for mission-critical networks



#### Ultra-High Speed Backbone

Wi-Fi 7 Performance for Demanding Applications

## GD-3100H

### Industrial IoT Gateway

- IEEE 802.11ah (Wi-Fi HaLow)
- Up to 32.5 Mbps PHY rate
- Long-range coverage > 1 km
- Sub-1 GHz (902–928 MHz)
- 1 × LAN port
- Terminal block or Type-C power input



#### Long-Range IoT Bridge

Reliable Connectivity Over 1 km+

## GD-3100H-U

### Industrial IoT USB Dongle

- IEEE 802.11ah (Wi-Fi HaLow)
- Up to 32.5 Mbps PHY rate
- Long-range coverage > 1 km
- Sub-1 GHz (902–928 MHz)
- USB plug-and-play
- Compatible with IPC, Notebook and Tablet



#### Instant Wireless Enablement

Plug. Connect.

### Control Center / Cloud

- Cloud Platform
- Data Center
- Remote Operation
- Monitoring & Management

### High-Speed Backbone Network

#### IW-3240H

Wi-Fi 7 Edge Gateway



- 10G SFP+ Backbone
- Multi-LAN
- Wi-Fi 7
- Wi-Fi HaLow

### Long-Range Wi-Fi HaLow Network (802.11ah)

#### GD-3100H

IoT Gateway



#### GD-3100H

IoT Gateway



#### GD-3100H

IoT Gateway



Field Devices

### Easy Integration

#### GD-3100H-U

USB Dongle



Bring Long-Range Connectivity to Any Device



IPC



Notebook



Tablet

### Applications

- Smart Factory
- AGV / AMR
- Smart Agriculture
- Utilities & Energy
- Transportation
- Remote Monitoring
- Public Safety



#### Future-Ready Performance

Wi-Fi 7 + HaLow for both high speed and long range.



#### Long-Range. Reliable.

Sub-1 GHz HaLow delivers stable connectivity over 1 km+.



#### Flexible Deployment

Gateway, USB dongle or hybrid – fit for any scenario.



#### Easy Integration

Seamless with existing infrastructure and a wide range of devices.



#### Lower TCO

Reduced wiring, longer range, lower deployment cost.

# Industrial Wireless Product Roadmap 2026 to 2027

## Wi-Fi 7 + Halow AP/Client

- **Model: IW-3240H series**
- IW-3240H/IW-3240H-8
- AP/Bridge/Client/MultiLAN/MultiWAN Support
- NMS/ Zero Touch / Node-RED Support
- Wi-Fi 802.11 a/b/g/n/ac /ax/be (2.4G/5GHz)
- IEEE 802.11ah Wi-Fi HaLow
- RS485/DI/Relay x 1
- Up to 10G SFP+ x2
- Console RJ45 x1
- USB 2.0 Host type-C x 1
- Operating Temperature : -40 ~ 70°C



## Wi-Fi 7+ Halow Client

- **Model: IW-3222H-C series**
- Client/MultiLAN/MultiWAN Support
- NMS/ Zero Touch / Node-RED Support
- Wi-Fi 802.11 a/b/g/n/ac /ax/be (2.4G/5GHz/6GHz)
- IEEE 802.11ah Wi-Fi HaLow
- 1G RJ45 x2
- Console RJ45 x1
- USB 2.0 Host type-C x 1
- Operating Temperature : -40 ~ 70°C



# Industrial IoT Product Roadmap 2026 to 2027

## WiFi Halow Gateway

### Model name: GD-3100H series

- GD-3100H /GD-3100H-8
- AP/Client/Gateway Support
- NMS/ Zero Touch / Node-RED Support
- IEEE 802.11ah Wi-Fi HaLow
- RS485/DI/Relay x 1
- RJ45 10/100M x 1
- Console RJ45 x1
- USB 2.0 Host type-C x 1
- RS232 or AI x1
- Operating Temperature : -40 ~ 70°C



## Wi-Fi Halow Extender

### Model :BX-3100H-G

- GPS(RTK Optional)
- NMS/ Zero Touch / Node-RED Support
- Wi-Fi Halow
- RS485/RS422/RS232 x 1
- CAN 2.0 x 1
- 10/100/1000M Ethernet RJ45 x2
- Console RJ45 x1
- USB 2.0 Host type-C x 1
- Operating Temperature : -40 ~ 70°C

## 11ah USB Dongle

### Model name: GD-3100H-U

- GD-3100H-U / GD-3100H-U8
- AP / Client Support
- NMS/ Zero Touch Support
- IEEE 802.11ah Wi-Fi HaLow
- USB 2.0 OTG type-C x 1
- Operating Temperature : -40 ~ 70°C



## AH 4G LTE CPE

### Model :BX-3100H-4G

- 4G LTE & GPS
- NMS/ Zero Touch / Node-RED Support
- Wi-Fi Halow
- RS485/RS422/RS232 x 1
- CAN 2.0 x 1
- 10/100/1000M Ethernet RJ45 x2
- Console RJ45 x1
- USB 2.0 Host type-C x 1
- Operating Temperature : -30 ~ 65°C



## Wi-Fi 5 & Halow Client

### Model :BX-3110H-5

- Client / MultiLAN Support
- NMS/ Zero Touch / Node-RED Support
- WiFi 5 2.4G/5G
- Wi-Fi Halow
- RS485/RS422/RS232 x 1
- CAN 2.0 x 1
- 10/100/1000M Ethernet RJ45 x2
- Console RJ45 x1
- USB 2.0 Host type-C x 1
- Operating Temperature : -40 ~ 70°C

# Industrial Automation Product Roadmap 2026

## CFX Box Gateway

- **Model :BX-3000-CF**
- CFX / SMT / PLC Support
- RS485/RS422/RS232 x 1
- CAN2.0 x 1
- 10/100M Ethernet RJ45 x2
- Console RJ45 x1
- USB 2.0 Host type-C x 1
- Operating Temperature : -40 ~ 70°C



## Smart Building Box Gateway

- **BX-3000-SB series**
- Model Name : BX-3000-SBY1/Y2/Y3/Y4/Y5
- BACnet / Modbus / OPCUA / MQTT Support
- RS485/RS422/RS232 x 1
- CAN2.0 x 1
- 10/100/100M Ethernet RJ45 x2
- Console RJ45 x1
- USB 2.0 Host type-C x 1
- IO : Y1-Y5
- Y1 : DI x 5 , Relay x 5
- Y2 : DI x 8 , SSR x 8
- Y3 : DI x 8 , NPN x 8
- Y4 : DI x 8 , PNP x 8
- Y5 : AI x 4 , AO x 4



## PLC Box Gateway

- **BX-3000-PL series**
- Model Name : BX-3000-PLY1/Y2/Y3/Y4/Y5
- EtherNetIP / SoftPLC / Modbus / OPCUA / MQTT Support
- RS485/RS422/RS232 x 1
- CAN2.0 x 1
- 10/100/100M Ethernet RJ45 x2
- Console RJ45 x1
- USB 2.0 Host type-C x 1
- IO : Y1-Y5
- Y1 : DI x 5 , Relay x 5
- Y2 : DI x 8 , SSR x 8
- Y3 : DI x 8 , NPN x 8
- Y4 : DI x 8 , PNP x 8
- Y5 : AI x 4 , AO x 4



# Techman Solution Architecture

## AIoT Solution



## Mobility Solution



## Zero Touch Solution



## Industrial Solution

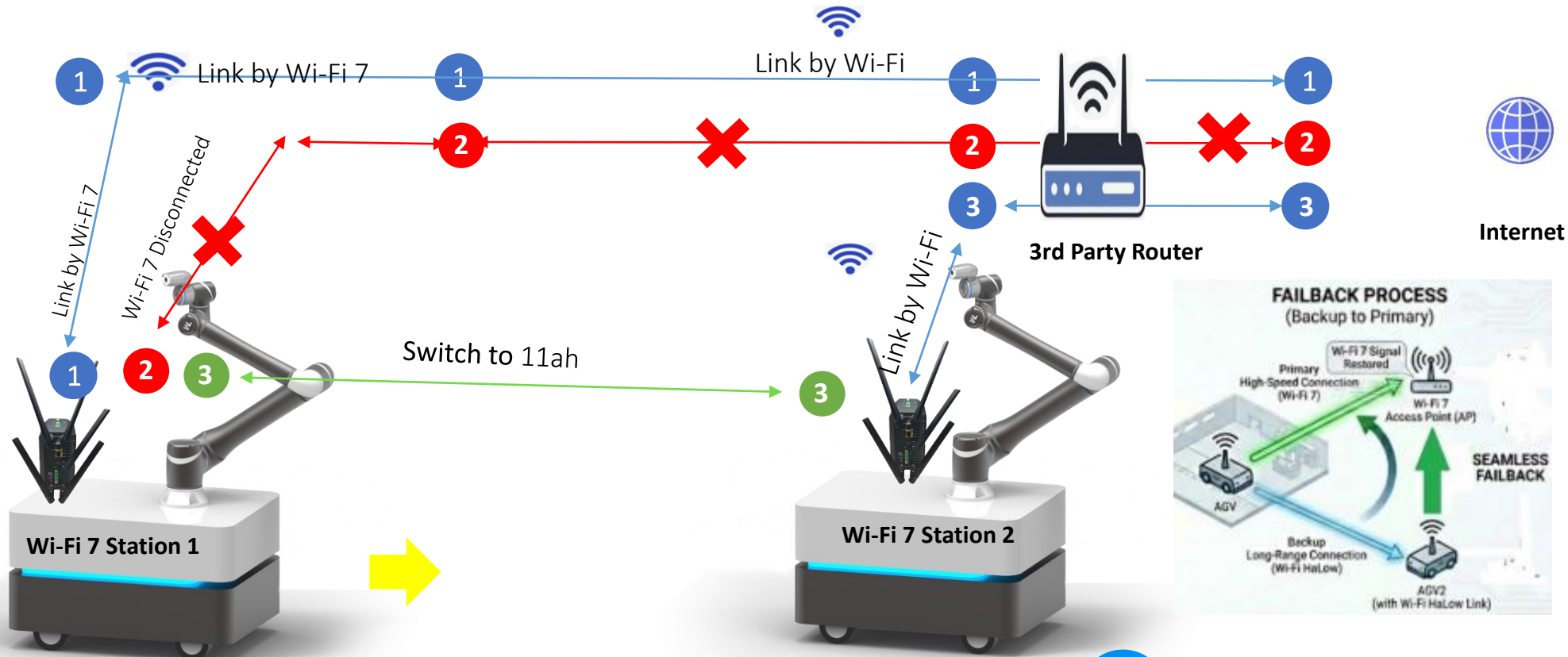
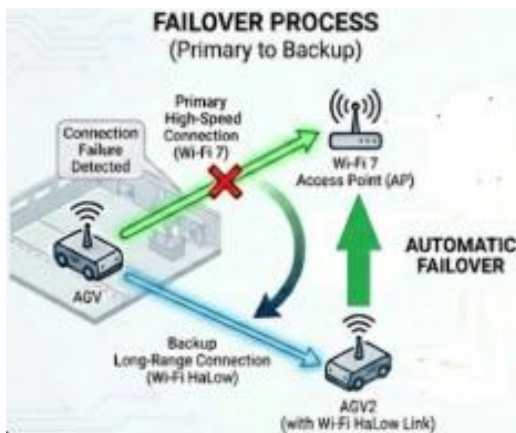
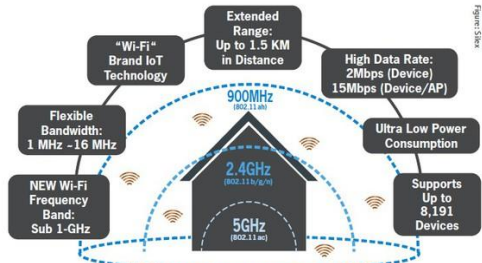


Social Media



AI Edge Computing

# TM MultiLAN Self-Healing Connectivity



**NORMAL OPERATION**

- ✓ Wi-Fi7 handles all data and control traffic at high speed

**SIGNAL DROP**

- ✓ Interface or obstacle blocks Wi-Fi7 signal

**11AH TAKEOVER**

- ✓ System instantly switches to 11ah
- ✓ Connectivity is maintained

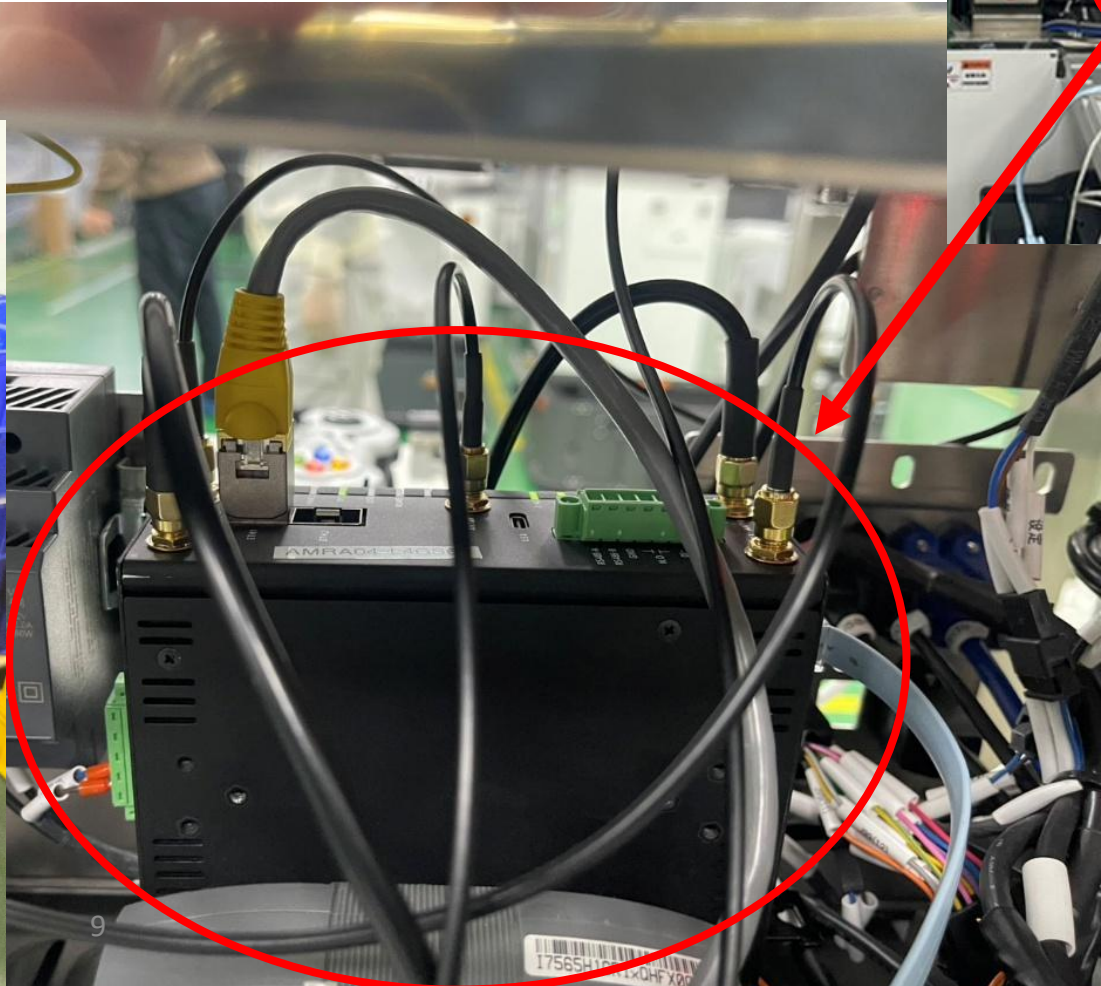
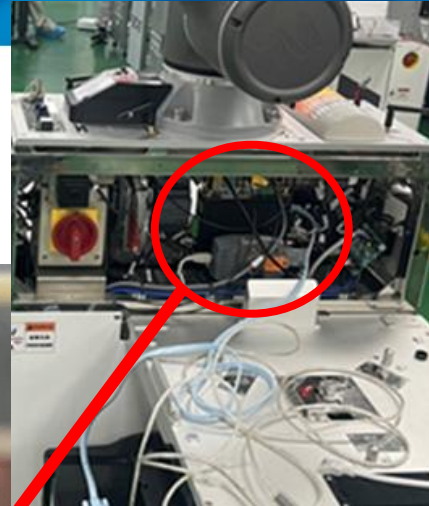
**AUTO-RECOVERY**

- ✓ When Wi-Fi 7 is available, 11ah will disconnected and switch back to Wi-Fi 7

# AMR with WIFI 7 + Halow Client Example



IW-3240H WIFI 7 + HaLow Gateway



# For use in the semi-outdoor environment to monitor valuable assets

## Deploy the WiFi Halow 802.11ah in more areas

Semi-outdoor environments typically experience significant temperature variations and require long transmission distances. Therefore, the GD-3100H AH Gateway, equipped with a wide-temperature design and capable of transmitting data up to 1 kilometer, paired with the WiFi 7 & 802.11ah AP IW-3240H, is particularly suitable.

This allows for the long-distance transmission of valuable data from environments such as greenhouse cultivation, livestock farming, and aquaculture.



**Greenhouse cultivation**



**Livestock farming**



**Aquaculture**

# Smart Agriculture

- a. Models: IW-3240H, GD-3100H, GD-3100H-U
- b. Key features:
  - Currently, the bandwidth of IoT technology is less than 802.11ah. Customers can utilize the GD-3100H's 802.11ah transmission technology and RS-485 interface to control remote devices via the IW-3240H, transmitting control signals and data.

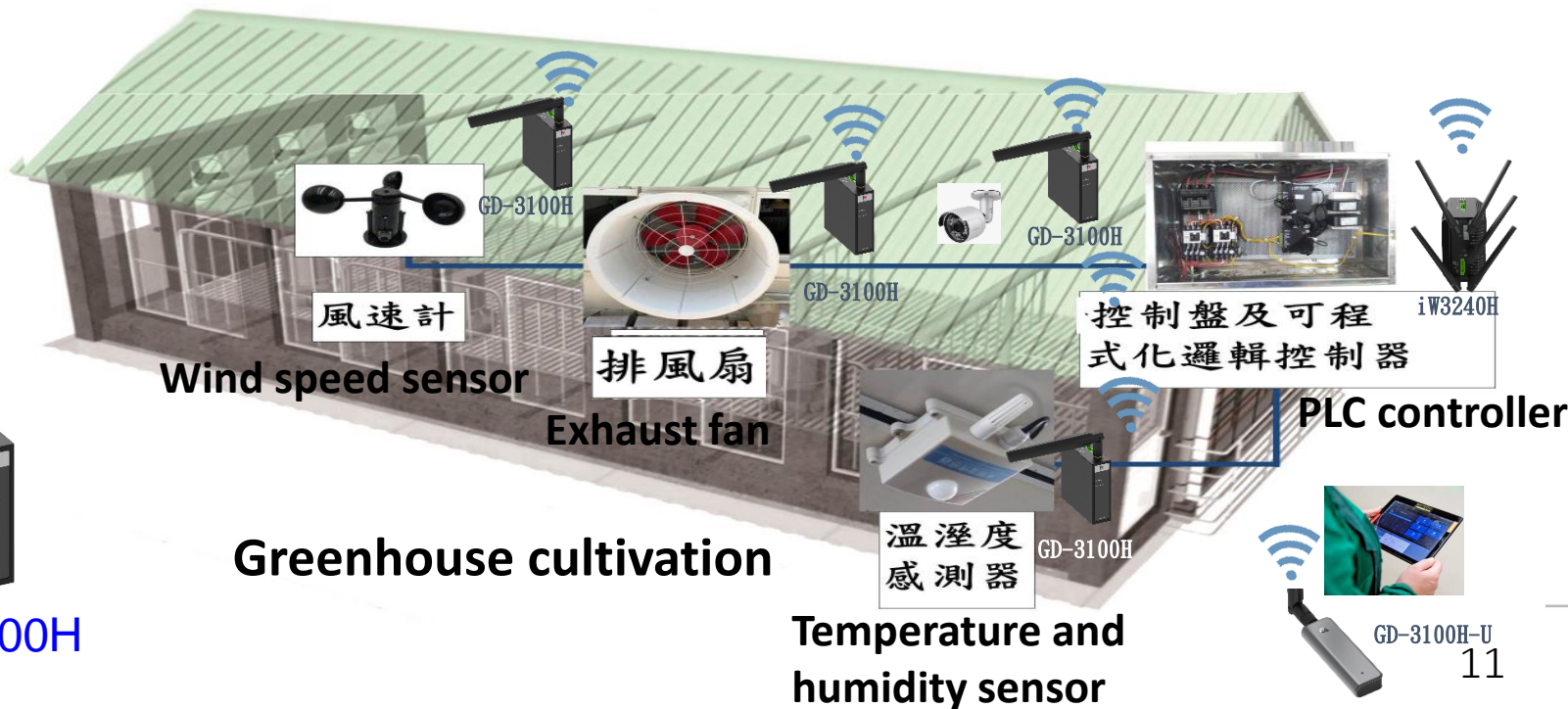


IPCAM



IW-3240H

GD-3100H



Greenhouse cultivation

Temperature and humidity sensor

# IP CAM with GD-3100H AH Gateway & GD-3100H-U AH Dongle

GD-3100H-U  
AH Dongle

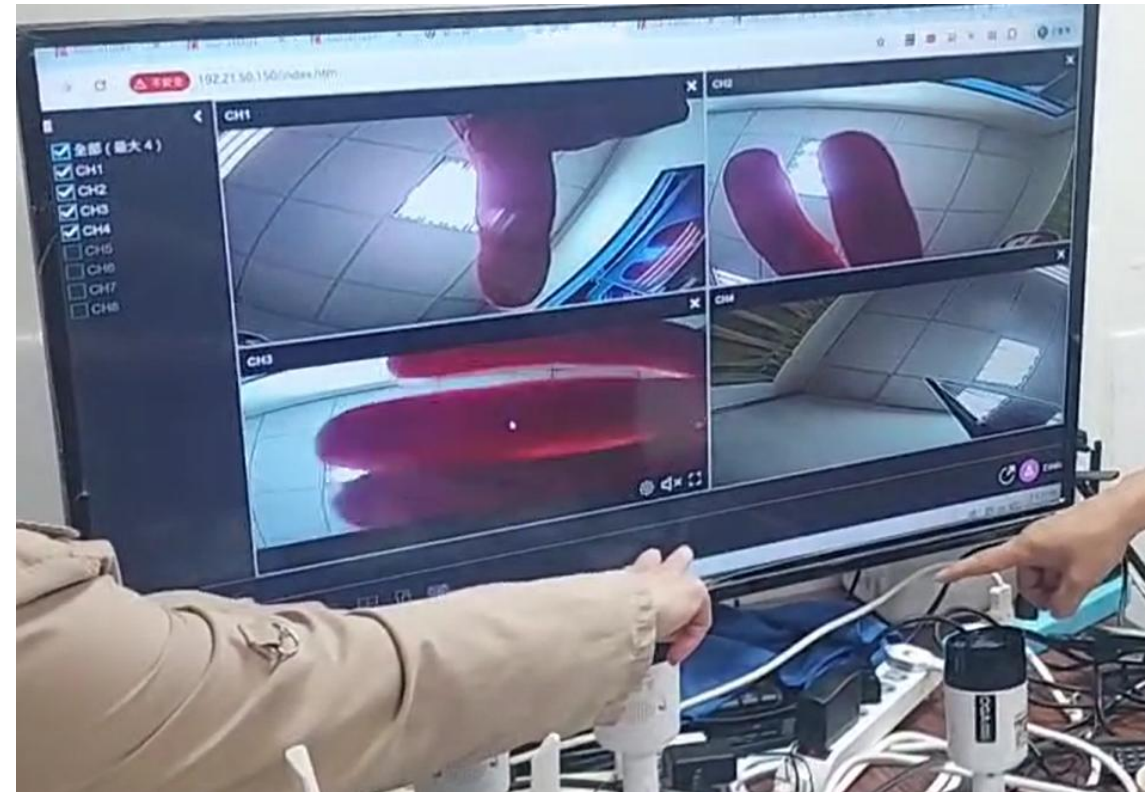


GD-3100H  
AH Gateway



# IP CAM with GD-3100H AH Gateway

- GD-3100H with IPCAM x 3.



GD-3100H  
AH Gateway



**THANKS!**