

# H8870

## 5G Enhanced Wi-Fi Router



### Overview

H8870 5G Enhanced Wi-Fi Router provides global 5G Sub-6GHz SA/NSA network access for mission-critical industrial IoT applications, which often require a mass data throughput and lower network latency. It features dual-band Wi-Fi 6 technology with multi-user MIMO, ensuring ultra-high cellular speeds of up to 3.4 Gbps. This 5G router is also equipped with dual SIM with auto-failover, five Gigabit Ethernet ports, including 2 LAN ports that support PSE. It is dedicated for massive data such as high-definition video stream backhaul and remote equipment maintenance and it is suitable for smart factories, medical equipment, robot vision, video surveillance, smart energy and other industrial fields.

### Highlights



#### Global 5G Sub-6GHz high-speed network

Provide seamless wireless network connectivity with high bandwidth, low latency and high reliability



#### WLAN Network

Wi-Fi 6 with dual-band multi-user MIMO wireless capabilities



#### Enhancing Data Security

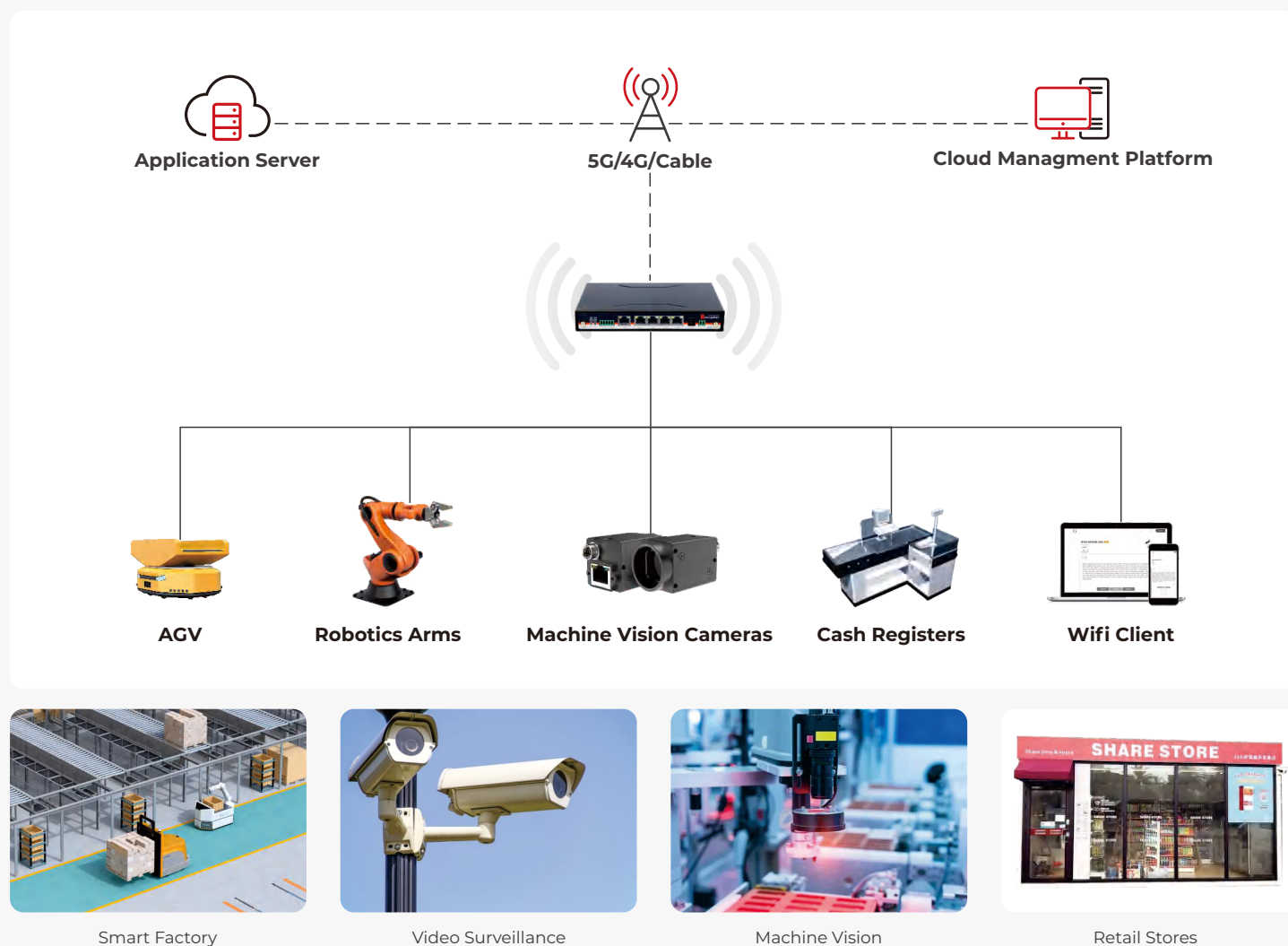
Data Protection with IPsec/OpenVPN/GRE/L2TP/PPTP/Wireguard



#### Cloud Management

Managed by Hongdian Cloud Server with SD-WAN networking, remote access anytime anywhere

## Topology diagram



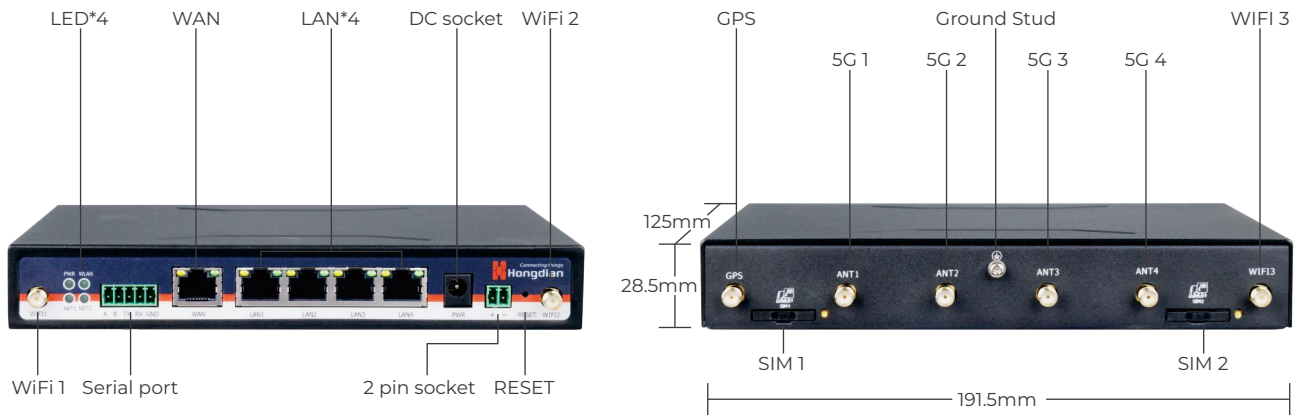
## Specification

| Hardware           |                                                               |                 |                   |
|--------------------|---------------------------------------------------------------|-----------------|-------------------|
| CPU                | Dual-core, 1.35 GHz, ARM Cortex A53                           |                 |                   |
| RAM                | 256MB                                                         | FLASH           | 32MB              |
| Cellular Interface |                                                               |                 |                   |
| Modem              | 1 × 5G NR SA/NSA or 2 × LTE-A or 1 × LTE-A & 1 × 5G NR SA/NSA |                 |                   |
| SIM                | 2 × Mini SIM (2FF) (eSIM optional)                            | Connector       | SMA-K             |
| Number of Antennas | 4                                                             |                 |                   |
| Ethernet Interface |                                                               |                 |                   |
| Number of Ports    | 5 × 10/100/1000 Mbps, Gigabit Ethernet                        | Configuration   | 4 × LAN + 1 × WAN |
| PoE Output         | POE+ 30W output × 4                                           |                 |                   |
| Wireless Interface |                                                               |                 |                   |
| Standards          | 802.11b/g/n/ac/ax, AP or station mode                         | Frequency Bands | 2.4 GHz & 5 GHz   |
| Speed              | 2402Mbps on 5GHz, 576Mbps on 2.4GHz                           | Security        | WEP, WPA, WPA2    |
| Encryption         | 64/128 AES, TKIP                                              | Antennas        | 3                 |
| Connector          | RP SMA-K                                                      |                 |                   |

# Specification

|                              |                                                                                                                                                   |                     |                                                 |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------|
| GNSS Interface               |                                                                                                                                                   |                     |                                                 |
| Number of Antennas           | 1 (only for GPS version)                                                                                                                          | Connector           | SMA-K with 50 ohms impedance                    |
| Seiral Interface             |                                                                                                                                                   |                     |                                                 |
| Type                         | 1 × RS-232 + 1 × RS-485 serial port                                                                                                               | Socket Form         | 1 × 5-pin 3.5 mm female socket                  |
| Signal Definition            | RX, TX, GND, A+, B-                                                                                                                               | Baudrate            | RS-232 (300-115200bps), RS-485 (300-115200bps)  |
| Software                     |                                                                                                                                                   |                     |                                                 |
| Auto Fail-over               | Between: 2 Cellulars, Cellular and WAN, Cellular and Wi-Fi (station mode), WAN and Wi-Fi (station mode)                                           |                     |                                                 |
| Network Protocols            | PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, HTTPs, DNS, ARP, NTP, SMTP, Telnet, SSH, DDNS, etc.                                                  |                     |                                                 |
| Network                      | APN, VPDN, VLAN, QoS                                                                                                                              |                     |                                                 |
| Routing                      | Static Routing, Policy routing, RIP, and OSPF, etc                                                                                                |                     |                                                 |
| Firewall                     | NAT, PAT, DMZ, Port Forward IP/Domain/MAC Filter, Access Control List                                                                             |                     |                                                 |
| Attack Prevention            | DDOS prevention, Anti port scanning                                                                                                               |                     |                                                 |
| VPN                          | PPTP/L2TP/GRE/IPSec/OpenVPN/WireGuard                                                                                                             |                     |                                                 |
| Ipssec Encryption            | DES, 3DES, AES128, AES192, AES256                                                                                                                 |                     |                                                 |
| OpenVPN Encryption           | BF-CBC, DES-CBC, RC2-CBC, DES-EDE-CBC, DES-EDE3-CBC, DESX-CBC, RC2-40-CBC, CAST5-CBC, RC2-64-CBC, AES-128-CBC, AES-192-CBC, AES-256-CBC, SEED-CBC |                     |                                                 |
| Remote Management            | HTTP, Telnet, SSH, SMS, SNMP V1/V2/V3, SNMP TRAP, Hongdian Cloud Platform, SDLAN, SDWAN                                                           |                     |                                                 |
| Serial Ports Function        | Transparent, Modbus RTU, etc                                                                                                                      |                     |                                                 |
| Power Supply and Consumption |                                                                                                                                                   |                     |                                                 |
| Connector                    | DC socket or 2 pin socket                                                                                                                         | Voltage Input       | +9V~+57V DC                                     |
| Others                       |                                                                                                                                                   |                     |                                                 |
| Reset Button                 | Yes                                                                                                                                               | Hardware Watchdog   | Yes                                             |
| LED Indicators               | 4 indicators for PWR, WLAN, NET1, NET2                                                                                                            |                     |                                                 |
| Physical Characteristics     |                                                                                                                                                   |                     |                                                 |
| Ingress Protection           | IP30                                                                                                                                              | Housing & Weight    | Metal, 980g                                     |
| Dimension                    | 191.5×125.0×28.5(mm)                                                                                                                              | Installations       | Desktop, wall mounting, 35 mm DIN rail mounting |
| Operating Temperature        | -30 ~ +70 °C                                                                                                                                      | Storage Temperature | -40 ~ +85 °C                                    |
| Relative Humidity            | ≤ 95% (no condensing)                                                                                                                             |                     |                                                 |
| EMC                          |                                                                                                                                                   |                     |                                                 |
| ESD                          | EN61000-4-2, level3                                                                                                                               | RS                  | EN 61000-4-3, level3                            |
| EFT                          | EN 61000-4-4, level3                                                                                                                              | Surge Protection    | EN 61000-4-5, level2                            |
| CS                           | EN 61000-4-6, level3                                                                                                                              |                     |                                                 |

## Appearance



## Ordering info

| Part No.                 | Network               | Frequencies                                                                                                                                                                                                                                                                                                                                       | Interface |        |          |      |       |       | Certifications<br>(*In progress) | Regions                                                           |
|--------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------|----------|------|-------|-------|----------------------------------|-------------------------------------------------------------------|
| <b>H8870-NREA-CS-W3</b>  | 5G NSA/SA             | <b>NSA/SA:</b> n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/n71/n75/n76/n77/n78<br><b>LTE FDD:</b> B1/B3/B5/B7/B8/B20/B28/B32/B71<br><b>LTE TDD:</b> B38/B40/B41/B42/B43<br><b>WCDMA:</b> B1/B5/B8                                                                                                                                                          | SIM       | WLAN   | GPS      | GigE | RS232 | RS485 | CE*                              | Europe, the Middle East, Africa, Korea, Thailand, India, Malaysia |
| <b>H8870-NREA-CS-W3G</b> |                       |                                                                                                                                                                                                                                                                                                                                                   | 2         | AX3000 | -<br>YES | 5    | 1     | 1     |                                  |                                                                   |
| <b>H8870-NRGL-CS-W3</b>  | 5G NSA/SA             | <b>NSA/SA:</b> n1/n2/n3/n5/n7/n8/n12/n13/n14/n18/n20/n25/n26/n28/n29/n30/n38/n40/n41/n48/n66/n70/n71/n75/n76/n77/n78/n79<br><b>LTE-FDD:</b> B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/B30/B32/B66/B71<br><b>LTE-TDD:</b> B34/B38/B39/B40/B41/B42/B43/B48<br><b>LAA B46(2 × 2 MIMO)</b><br><b>WCDMA:</b> B1/B2/B4/B5/B8/B19 | SIM       | WLAN   | GPS      | GigE | RS232 | RS485 | CE*, FCC*                        | Global                                                            |
| <b>H8870-NRGL-CS-W3G</b> |                       |                                                                                                                                                                                                                                                                                                                                                   | 2         | AX3000 | -<br>YES | 5    | 1     | 1     |                                  |                                                                   |
| <b>H8870-L6GL-CS-W3G</b> | LTE Cat6              | <b>LTE-FDD:</b> B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/B30/B32/B66/B71<br><b>LTE-TDD:</b> B34/B38/B39/B40/B41/B42/B43/B46 (LAA)/B48 (CBRS)<br><b>WCDMA:</b> B1/B2/B3/B4/B5/B6/B8/B19                                                                                                                                    | 2         | AX3000 | YES      | 5    | 1     | 1     | CE*, FCC*                        | Global                                                            |
| <b>H8870-D6EA-CS-W3</b>  | 2 modules<br>LTE Cat6 | <b>4G( LTE-FDD):</b> B1/B3/B5/B7/B8/B20<br><b>4G (LTE-TDD):</b> B38/B40/B41<br><b>3G(WCDMA):</b> B1/B5/B8<br><b>2G:</b> B3/B8                                                                                                                                                                                                                     | 2         | AX3000 | -        | 5    | 1     | 1     | CE*                              | Europe, the Middle East, Africa, Korea, Thailand, India, Malaysia |

\* For example, H8870-L6GL-CS-W3G, H8870 4G Router, support LTE Cat6, the application area is Global, support RS-232 and RS-485, support Wi-Fi(AX3000) and GPS. H8870-NREA-CS-W3, H8870 5G Router, support 5G NSA/SA, the application area is Europe, the Middle East, Africa, Korea, Thailand, India, Malaysia region, support RS-485 and RS-232, support two Wi-Fi antennas(AX3000).

## Packing list



Packing Box



H8870 5G Enhanced Wi-Fi Router



Power adaptor (USA, FCC, UL)  
\* Other types available



4x5G Antenna



Wi-Fi Antenna



Power Adaptor (EU Type)  
\* Other types available



GPS Antenna  
\* Only GPS Version



RJ45 Cable



Installation Kit