Connecting things
Hongdian

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H8820
5G Edge Router



Overview

The H8820 router is a lightweight 5G Wi-Fi 6 router. It supports 5G Sub-6 GHz SA/NSA network for mission-critical industrial and commercial IoT applications, which often require a mass data throughput and lower network latency. It features dual-band Wi-Fi 6 technology, and ensuring ultra-high cellular speeds of up to 3.4 Gbps. This 5G router is also equipped with dual SIM with auto-failover, two Gigabit Ethernet ports, external TF card interface support local storage and data processing. 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

High Performance

Support local data storage and analysis, with powerful real-time data processing and computing capabilities

Rich industrial protocols

Multiple industrial protocols, such as Modbus, OPC UA, BACNet/IP, IEC101/104, IEC61850, etc

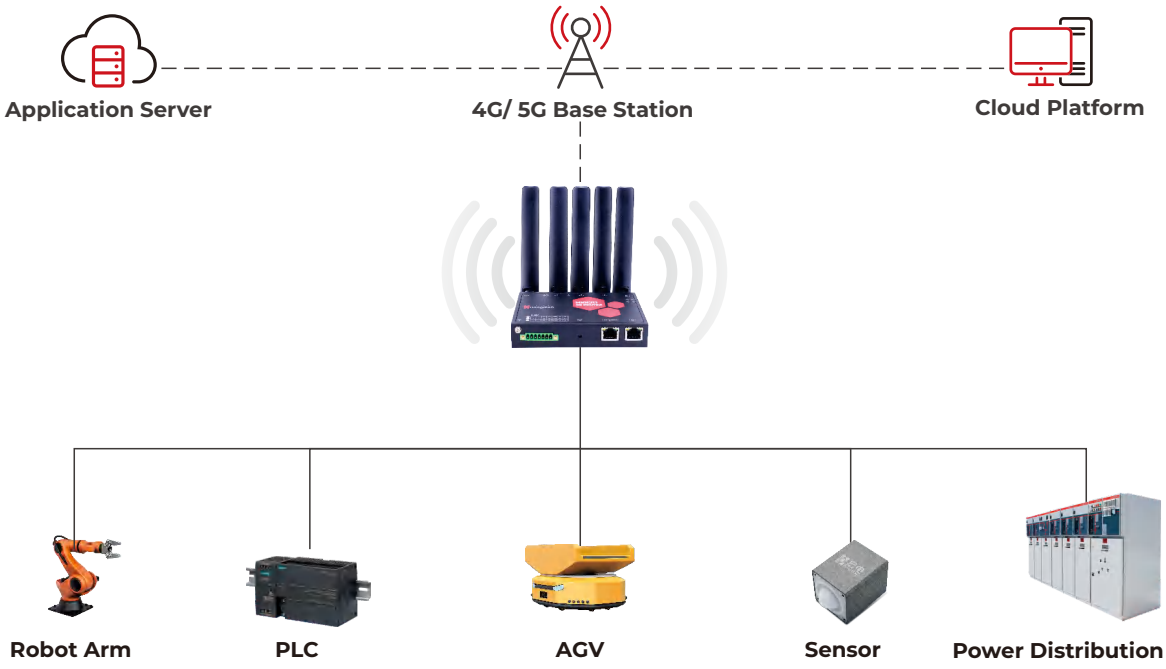
Efficient Operation and Maintenance

Support remote maintenance and SDLAN

Wi-Fi 6

2.4G&5G dual band Wi-Fi 6 for up to 32 users

Topology diagram




Smart Manufacturing


Smart Factory


Smart Water


Smart Energy

Specification

Hardware			
CPU	Dual-core, 1.35GHz, ARM Cortex A53	**RAM**	512MB
FLASH	32MB (64MB Optional)	**SD Card**	TF Card Slot
Cellular Interface			
Modem	1 × 5G NR or 1 × 5G Redcap or 1 × LTE	**Number of Antennas**	4
SIM	2 × Mini SIM (2FF)	**Connector**	SMA-K
Wireless Interface			
Standards	802.11b/g/n/ac/ax, AP or station modes	**Frequency Bands**	2.4 GHz & 5.8GHz
Speed	1200Mbps on 5GHz, 288Mbps on 2.4GHz	**Security**	WEP, WPA, WPA2, WPA3
Encryption	64/128 AES, TKIP	**Antennas**	1
Connector	RP-SMA-K		
Ethernet Interface			
Number of Ports	4 × LAN 10/100/1000Mbps, Gigabit Ethernet	**Socket Form**	2 × LAN or 1 × LAN + 1 × WAN

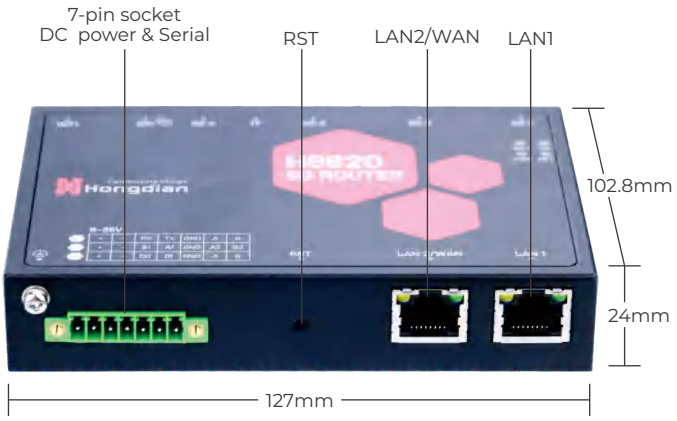
Serial Interface			
Type	1 × RS-232 + 1 × RS-485 or 2 × RS-485 or 1 × DIDO + 1 × RS-485		
Socket Form	1 × 7-pin 3.5 mm female socket		
Signal Definition	RX, TX, GND (RS-232) , A+, B-, GND (RS-485), DI, DO(IO)		
Baudrate	RS-232 (300-115200bps), RS-485 (300-115200bps)		
GNSS Interface			
Number of Antennas	1 (only for GPS Version)	**Connector**	SMA-K with 50ohms impedance
Software			
Auto Fail-over	Between: Cellular and WAN, Cellular and Wi-Fi (station mode), WAN and Wi-Fi (station mode)		
Network Protocols	PPP, PPPoE, TCP, UDP, IPv4, IPv6, SSL, DHCP, ICMP, NAT, HTTP, HTTPs, DNS, ARP, NTP, Telnet, SSH, DDNS, etc.		
Network	APN, VPDN, VLAN, QoS		
Routing	Static Routing, Policy routing, RIP, OSPF and BGP, etc		
Firewall	NAT, PAT, DMZ, Port Forword IP/Domain/MAC Filter, Access Control List		
VPN	PPTP/L2TP/GRE/IPSec/OpenVPN/WireGuard		
Remote Management	HTTP, Telnet, SSH, SMS, SNMP V1/V2/V3, SNMP TRAP, Hongdian Sandora Platform, SDLAN, SDWAN		
Serial Ports Function	Transparent, Modbus RTU, etc		
Industrial Protocol			
Common Protocols	OPC-UA Client&Server, BACNet/IP Client&Server, Modbus RTU/TCP/ASCII, Modbus Master, BACnet/IP, Ethernet/IP, IEC101/104, IEC61850-modbus, etc.		
PLC Support	Siemens, Mitsubishi, Omron, Allen-Bradley, Delta, Shineider, etc 200+ PLCs & Meters		
Cloud Integration	MQTT, HTTPS, TCP/UDP, etc.	**Configuration Tool**	GatewayManager
Power Supply and Consumption			
Connector	2 pin socket	**Voltage Input**	+9V~+36V DC
Power Consumption	Idle: 400mA@12V DC, Data transceiving: 2A@12V DC		
Others			
Reset Button	Yes	**Hardware Watchdog**	Yes
LED Indicators	4 indicators for Wi-Fi, SIG, NET, PWR		
Physical Characteristics			
Ingress Protection	IP30	**Housing & Weight**	Metal, 360g
Dimension(mm)	127 × 102.8 × 24 mm		
Operating Temperature	-40 ~ +65 °C	**Storage Temperature**	-40 ~ +85 °C
Relative Humidity	5 ~ 95%	**Installations**	Desktop, 35 mm DIN rail mounting

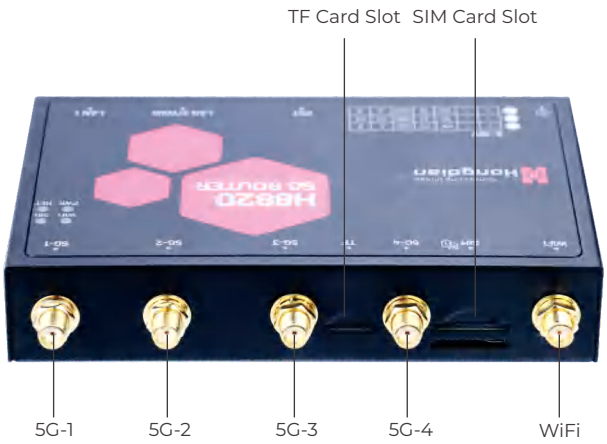
Ordering info

Part No.	Modem	Band	Region*	RS-232	RS-485	DIDO	Wi-Fi	Ethernet
H8820-L4EU-CS-W6	Single LTE Cat4	**LTE FDD:** B1/3/5/7/8/20/28 **LTE TDD:** B38/40/41 **WCDMA:** B1/5/8 **GPRS/EDGE:** B3/8 **LTE TDD** (B38/B40/B41) **LTE FDD** (B1/B3/B5/B7/B8/B20/B28) **WCDMA** (B1/B8) **GSM/GPRS/EDGE** (900/1800MHz)	EU	1	1	–	PR-SMA 802.11ax	2
H8820-L4GL-2S-W6	Single LTE Cat4	**LTE FDD:** B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28 **LTE-TDD:** B38/39/40/41 **UMTS:** B1/2/4/5/6/8/19 **GSM:** B2/3/5/8	GL	–	2	–	PR-SMA 802.11ax	2
H8820-NREU-CS-W6	Single 5G NR	**NSA/SA:** n1/3/5/7/8/20/28/38/40/41/71/75/76/77/78 **LTE FDD:** B1/3/5/7/8/20/28/32/71 **LTE TDD:** B38/40/41/42/43 **WCDMA:** B1/5/8	EU	1	1	–	PR-SMA 802.11ax	2
H8820-NREU-2S-W6	Single 5G NR	**NSA/SA:** n1/3/5/7/8/20/28/38/40/41/71/75/76/77/78 **LTE FDD:** B1/3/5/7/8/20/28/32/71 **LTE TDD:** B38/40/41/42/43 **WCDMA:** B1/5/8	EU	–	2	–	PR-SMA 802.11ax	2
H8820-NREA-CS-W6	Single 5G NR	**R16, NSA:** n78/79, **SA:** n1/3/5/8/28/41/77/78/79 **R15, NSA:** n78/79, **SA:** n1/3/5/8/28/41/77/78/79 **LTE FDD:** B1/3/5/8, **LTE TDD:** B34/38/39/40/41, **WCDMA:** B1/8	EA	1	1	–	PR-SMA 802.11ax	2
H8820-NREA-2S-W6	Single 5G NR	**R16, NSA:** n78/79, **SA:** n1/3/5/8/28/41/77/78/79 **R15, NSA:** n78/79, **SA:** n1/3/5/8/28/41/77/78/79 **LTE FDD:** B1/3/5/8, **LTE TDD:** B34/38/39/40/41, **WCDMA:** B1/8	EA	–	2	–	PR-SMA 802.11ax	2
H8820-NREN-CS-W6	Single 5G NR	**NSA/SA:** n1/2/3/5/7/8/12/20/25/28/38/40/41/48/66/71/77/78/79 **LTE-FDD:** B1/2/3/4/5/7/8/9/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 **LTE-TDD:** B34/38/39/40/41/42/43/48 **LTE DL 4×4 MIMO:** B1/2/3/4/7/25/30/32/34/38/39/40/41/42/43/48/66 **LAA:** B46 (only support 2 × 2 MIMO) **WCDMA:** B1/2/3/4/5/6/8/19	EN	1	1	–	PR-SMA 802.11ax	2
H8820-NREN-2S-W6	Single 5G NR	**NSA/SA:** n1/2/3/5/7/8/12/20/25/28/38/40/41/48/66/71/77/78/79 **LTE-FDD:** B1/2/3/4/5/7/8/9/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 **LTE-TDD:** B34/38/39/40/41/42/43/48 **LTE DL 4×4 MIMO:** B1/2/3/4/7/25/30/32/34/38/39/40/41/42/43/48/66 **LAA:** B46 (only support 2 × 2 MIMO) **WCDMA:** B1/2/3/4/5/6/8/19	EN	–	2	–	PR-SMA 802.11ax	2
H8820-NRGL-CS-W6	Single 5G NR	**NSA/SA:** n1/2/3/5/7/8/12/13/14/18/20/25/26/28/29/30/38/40/41/48/66/70/71/75/76/77/78/79 **LTE FDD:** B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 **LTE TDD:** B34/38/39/40/41/42/43/48 **LAA:** B46 **WCDMA:** B1/2/4/5/8/19	GL	1	1	–	PR-SMA 802.11ax	2
H8820-NRGL-2S-W6	Single 5G NR	**NSA/SA:** n1/2/3/5/7/8/12/13/14/18/20/25/26/28/29/30/38/40/41/48/66/70/71/75/76/77/78/79 **LTE FDD:** B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 **LTE TDD:** B34/38/39/40/41/42/43/48 **LAA:** B46 **WCDMA:** B1/2/4/5/8/19	GL	–	2	–	PR-SMA 802.11ax	2
H8820-NRGL-S-IO-W6	Single 5G NR	**NSA/SA:** n1/2/3/5/7/8/12/13/14/18/20/25/26/28/29/30/38/40/41/48/66/70/71/75/76/77/78/79 **LTE FDD:** B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 **LTE TDD:** B34/38/39/40/41/42/43/48 **LAA:** B46 **WCDMA:** B1/2/4/5/8/19	GL	–	1	1	PR-SMA 802.11ax	2

* GL-Global, EU-EMEA(Europe, the Middle East, Africa)/APAC(Non-CN/JP)/Brazil, EA-EMEA(Europe, the Middle East, Africa)/APAC, EN-Europe,North America.

Appearance





Packing list

			
Packing box	**H8820 5G edge router**	**4×NR antennas**	**Wi-Fi antennas**
 DC Male Power Cable			
AC/DC Adaptor	**Ethernet cable**	**Mounting kits**	

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