

Alpha Bridge AR-HNR100 Datasheet



Introduction

AR-HNR100 is a wireless communication router for the Internet of Things (IoT), it uses a high-performance industrial level 32-bit communication processor and wireless module, embedded with the real-time operating system as the software platform, and using 3G/4G/5G cellular network to provide users with wireless long-distance large data transmission function.

High-performance industrial-grade wireless module

High-performance industrial-grade 32-bit communication processor

Metal shell, protection grade IP30. Metal housing and system safety isolation Wide power input DC 9~36V

Stability & Reliability

WDT Watchdog design to ensure system stability

- Adopt a complete anti-drop mechanism to ensure that the data terminal is always online
- Built-in 1.5KV electromagnetic isolation protection for Ethernet interface
- RS232/RS485 interface power and data isolation, in line with CSA, UL and IEC standards
- SIM/UIIM card interface built-in 15KV ESD protection
- Built-in reverse phase protection and over voltage protection for power interface

Standard & Convenience

- Standard RS232, RS485, Ethernet and WIFI Interface
- Standard WAN port (support standard PPPOE protocol), which can be directly connected to ADSL equipment
- Intelligent data terminal, can enter data transmission state after power on
- Easy to use, flexible, multiple working mode options
- Convenient system configuration and maintenance interface (WEB/CLI)
- Support wall-mounted, pole-mounted installation

High Performance

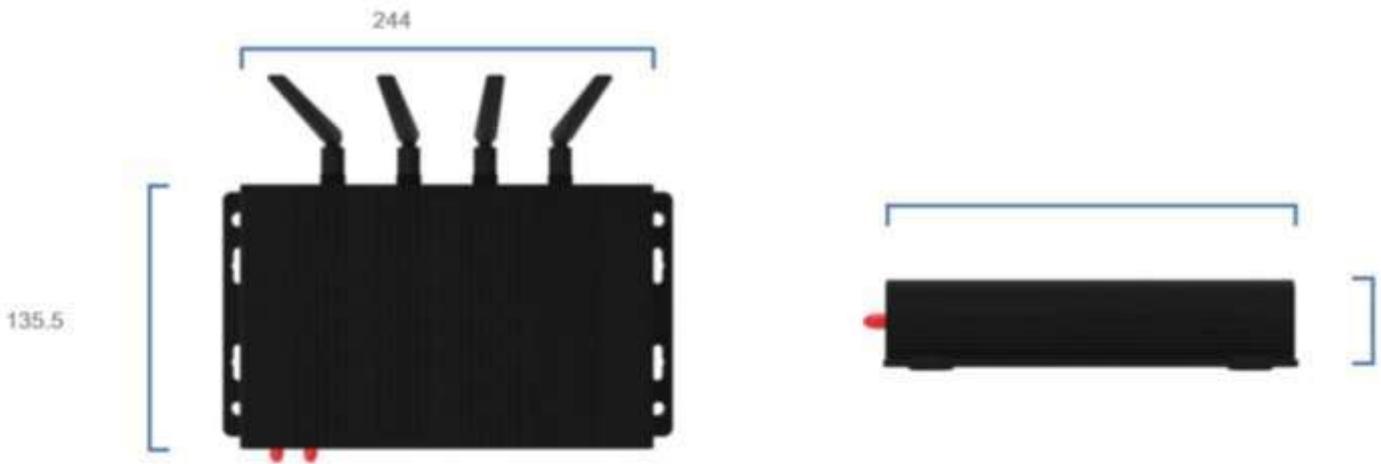
- Multiple WAN connection methods, include static IP, DHCP, PPPOE, 3G/UMTS/4G/LTE, DHCP-4G/5G
- 3G/4G/5G and wired WAN dual link backup (optional)
- VPN client PPTP/L2TP/IPSE (only available in VPN version)
- VPN sever PPTP/L2TP/IPSEC (only available in VPN version)
- Remote management SYSLOG/SNMP/TELNET/SSH/HTTPS
- Support local upgrade and remote upgrade Import and export configuration files
- NTP / Built in RTC
- MAC address clone
- WIFI support 802.11b/g/n/ac, support WIFI AP /AP Client/bridge mode etc. (optional)
- WIFI support WEP/WPA/WPA2 encryption
- Support multiple online and offline trigger modes
- Support APN/VPDN
- Support DHCP server / DHCP client/ DHCP binding MAC/DDNS/NAT/DMZ/QOS
- Support TCP/IP/UDP/FTP (Optional) /HTTP and other network protocols
- Support SPI firewall
- Support URL filter
- Support IPV6/IPV4, 5G LAN
- Support lock frequency, lock resident
- Support EOIP, bridge mode, VxLAN, virtual IP, GRE/TAP, etc.
- Support traffic statistics, VLAN management, and VLAN division

Product Specification

Cellular Specification		
Product	AR-HNR100	AR-HNR100 RedCap
Items	Contents	
Module	Industrial grade wireless module	
Frequency	5G NR: n1/n2/n3/n5/n7/n8/n20/n28/n41/n66/n71/n77/n78/ n79 LTE: B1/B2/B3/B4(66)/B5(18/19/26)/B7/B8/B12(17)/B13 /B14/B20/B25/B26/B28/B29/B30/B38/B39/B40/B4 1/B42/B43/ B46/ B48/B71	5G NR: N1/N3/N5/N8/N28/N41/N78/N79 LTE-FDD:B1/B3/B5/B8 LTE-TDD:
Bandwidth	5G NR : DL 3.4Gbps, UL 350Mbps LTE Cat20 : DL 2.0Gbps, UL 150Mbps HSPA+ : DL 42Mbps, UL 5.76Mbps	Downlink: 226Mbps Uplink: 120Mbps
Power	< 23dBm	
Sensitivity	<-97dBm	
WIFI Specification		
Product	AR-HNR100	AR-HNR100 RedCap
Items	Contents	
Frequency	IEEE802.11b/g/n, 2.4G, AP mode, Station mode (Optional) IEEE802.11ac, 5.8G, AP mode, Station mode (Optional)	
Bandwidth	IEEE802.11b/g : 54Mbps IEEE802.11n : 300Mbps IEEE802.11ac : 866Mbps	
Security	WEP, WPA, WPA2 encryption, WPS (Optional)	
Power	26dBm (11b), 21dBm (11ac/MCS7/HT40), 20dBm (11ac/MCS9/HT80)	
Sensitive	<-72dBm@54Mbps	
Hardware System		
Items	Contents	
CPU	Industrial-grade 32-bit communication processor	
FLASH	Nor flash 16MB NAND flash 128MB	
DDR3	512MB	
Interfaces		
Items	Contents	
WAN	1 x 1000M ETH port, auto adapt MDI/MDIX, built in 1.5KV ESD	
LAN	4 x 1000M ETH port, auto adapt MDI/MDIX, built in 1.5KV ESD	
Console	1 x RS232 , Built in 15KV ESD : Data bit : 5, 6, 7, 8 Stop bit : 1, 1.5 (Optional), 2 check : NONE, ODD, EVEN, SPACE (Optional) and MARK (Optional) Baud rate : 2400~115200bits/s	
Indicators	"PWR", "SYS", "2.4G", "5.8G", "Online", "Signal"	
Antenna	Cellular : 4 x SMA female, characteristic impedance 50 ohms	Cellular : 2 x SMA female, characteristic impedance 50 ohms
	WIFI : 2 x SMA male, characteristic impedance 50 ohms	WIFI : 2 x SMA male, characteristic impedance 50 ohms
SIM/UIM	Standard drawer type(2 x SIM slot), 1.8V/3V SIM/UIM,15KV ESD protection	
Power	2.5mm DC interface built-in power reverse protection	
TF card	Micro SD card interface	

Reset Button	Through this button, the parameter configuration can be restored to the factory	
Power Supply		
Product	AR-HNR100	AR-HNR100 RedCap
Items	Contents	
Standard	DC 12V/1.5A	
Range	DC 9~36V	
Physical Properties		
Items	Contents	
shell	Metal Shell, IP30	
size	244x13.5x35.8 mm (Does not include antenna and mounting parts)	
Weight	980g	
Others		
Items	Contents	
Operating Temperature	-35~+75C (-31~+167F)	
Storage Temperature	-40~+85°C (-40~+185 °F)	
Relative Humidity	95% (No Condensation)	

Dimension (mm)



Note: 5G Redcap version provide two cellular antennas.

Ordering information

Part Number	Product Description
AR-HNR100	Cellar Router (5G NR) with 2.4G/5GWIFI, SIM*2
AR-HNR100 Redcap	Cellar Router (5G Redcap) with 2.4G/5GWIFI, SIM*2

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