AR7088H Router Specification

Support 4G/5G Industrial Cellular Router

Xiamen Alotcer Communication Technology Co., Ltd.

Tel:+86 592-6195619

Fax:+86 592-6195620

Web:en.alotcer.com

E-mail:anne@alotcer.com

Add:NO.146-148, 2nd XingBei Road, JiMei District,
   XiaMen,China.

Applicable Models:

Product Type	Model	Product Name
Standard	AR7088H-WSTD	WCDMA Cellular Router
	AR7088H-RSTD	5G Cellular Router
	AR7088H-FSTD	FDD-LTE Cellular Router
	AR7088H-ASTD	TDD/FDD-LTE Cellular Router
Enhanced	AR7088H-W	WCDMA Cellular WiFi Router
	AR7088H-R	5G Cellular WiFi Router
	AR7088H-F	FDD-LTE Cellular WiFi Router
	AR7088H-A	TDD/FDD-LTE Cellular WiFi Router
Dual SIM	AR7088H-WS	WCDMA Dual SIM Cellular WiFi Router
	AR7088H-RS	5G Dual SIM Cellular WiFi Router
	AR7088H-FS	FDD-LTE Dual SIM Cellular WiFi Router
	AR7088H-AS	TDD/FDD-LTE Dual SIM Cellular WiFi Router
GPS	AR7088H-WP	GPS+WCDMA Cellular WiFi Router
	AR7088H-RP	GPS+5G Cellular WiFi Router
	AR7088H-FP	GPS+FDD-LTE Cellular WiFi Router
	AR7088H-AP	GPS+TDD/FDD-LTE Cellular WiFi Router
GPS+Dual SIM	AR7088H-WSP	GPS+WCDMA Dual SIM Cellular WiFi Router
	AR7088H-RSP	GPS+5G Dual SIM Cellular WiFi Router
	AR7088H-FSP	GPS+FDD-LTE Dual SIM Cellular WiFi Router
	AR7088H-ASP	GPS+TDD/FDD-LTE Dual SIM Cellular WiFi Router
WiFi Router	AR7088H-N	WiFi Router

General

AR7088H ROUTER is a kind of terminal device that developed based on 2G/3G/4G/5G, WIFI, VPN technology. It adopts high-powered industrial 32-bits CPU and embedded real time operating system. It supports RS232 and RS485, Ethernet and WIFI port that can conveniently and transparently connect one device to a cellular network, allowing to connect to your existing serial, Ethernet and WIFI devices with only basic configuration.
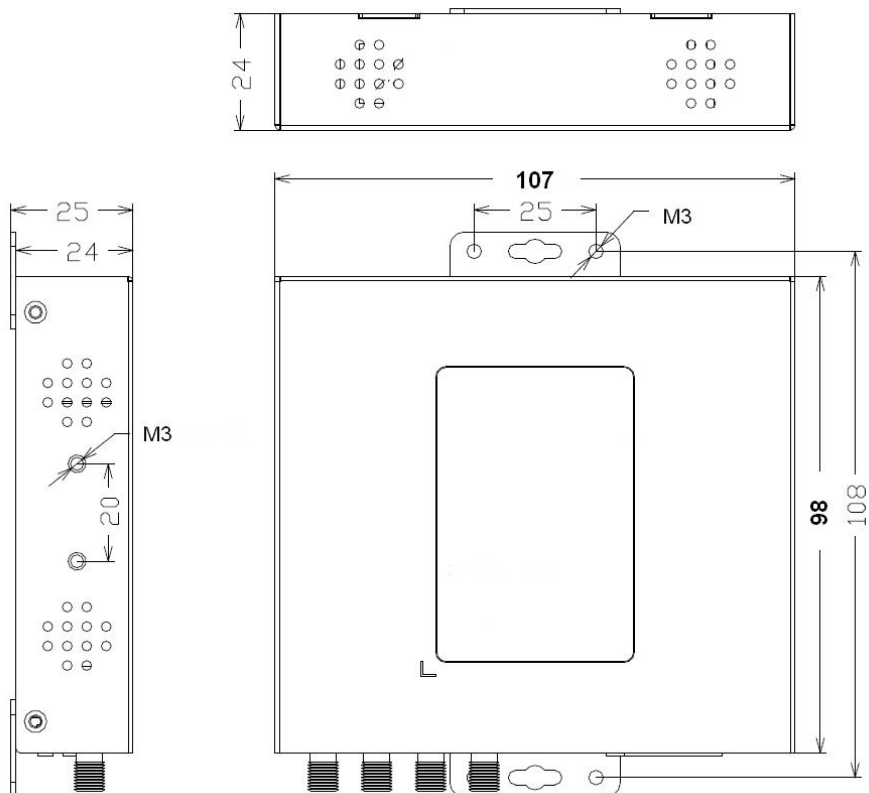
It has been widely used on M2M fields, such as intelligent transportation, smart grid, postal services,industrial automation, telemetry, finance, POS, water supply, environment protection, post, weather, and so on.
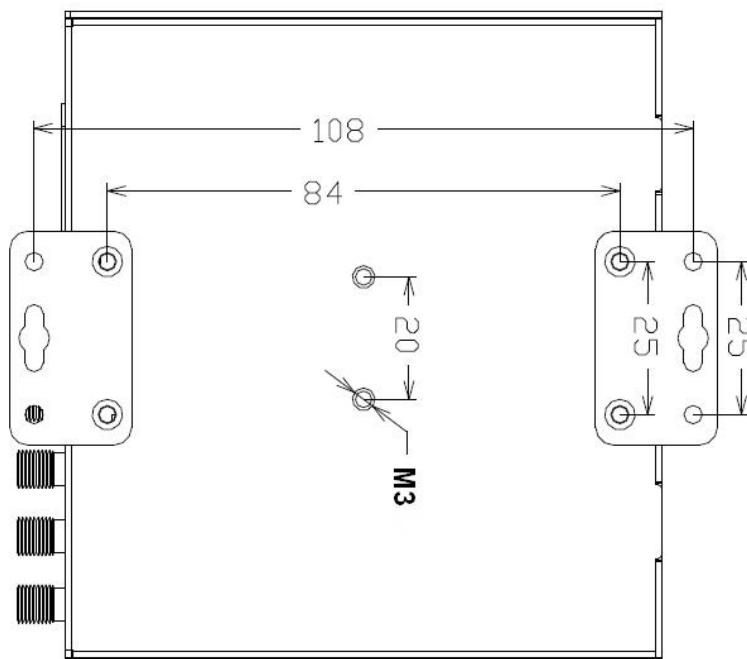
Application Topology
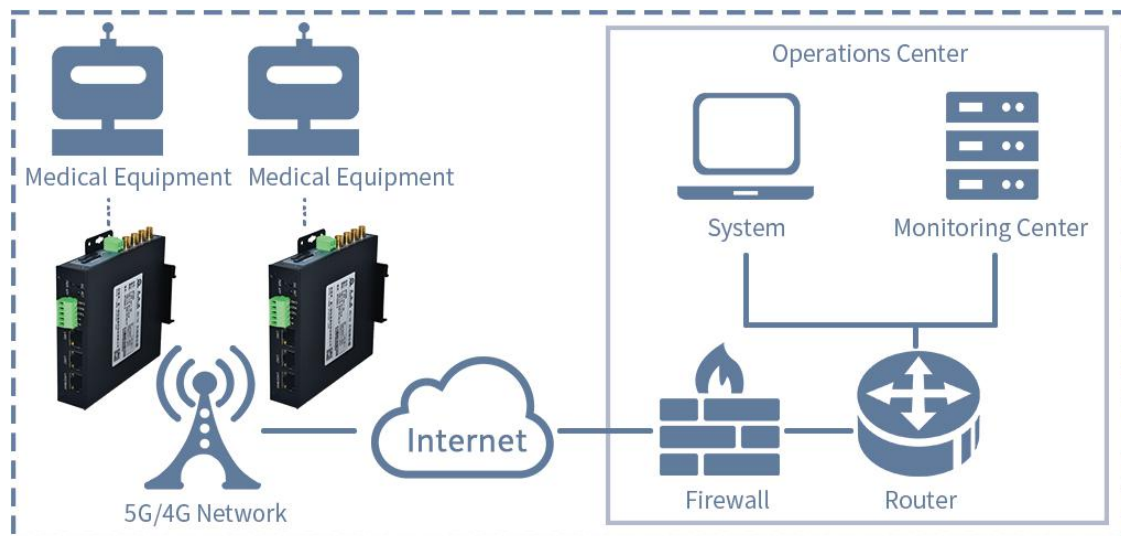
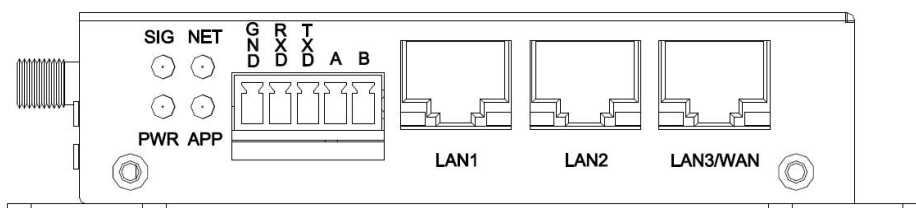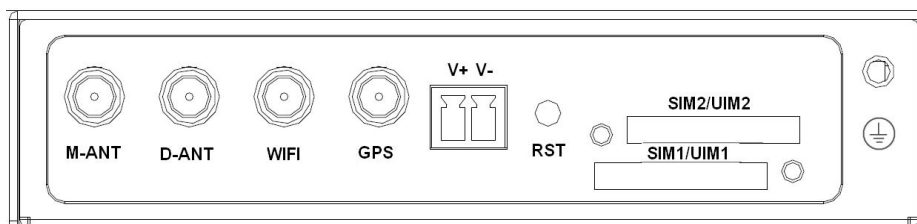## Product Size

Dimension: (Unit: mm)

Product Feature

Items	Contents
Industrial Design	High-powered industrial cellular module
	High-powered industrial 32bits CPU
	Housing: Iron, providing IP30 protection.
	Power range: DC 9~35V
High Reliability	Support hardware and software WDT
	Support auto recovery mechanism to make router always online
	Ethernet port: 1.5KV magnetic isolation protection
	RS232/RS485 port: 15KV ESD protection
	SIM/UIM port: 15KV ESD protection
	Power port: reverse-voltage and over voltage protection
	Antenna port: lightning protection (optional)
Standard and Convenience	Support standard RS232 and RS485, Ethernet and WIFI port that can connect to serial, Ethernet and WIFI devices directly
	Support standard WAN port and PPPOE protocol that can connect to ADSL directly
	Support intellectual mode, enter into communication state automatically when powered

	Support several work modes
	Convenient configuration and maintenance interface（WEB or CLI）
	Supports Fixed ear and 35mm Din-rail mounting
High-perform ance and Security	Support multiple WAN access methods, including static IP, DHCP, PPPOE, 2.5G/3G/4G/5G.
	Support double link backup between 2.5G/3G/4G/5G and WAN (optional).
	Support VPN client(PPTP, L2TP, IPSEC and GRE).
	Support remote management, SYSLOG, SNMP, TELNET, SSH, HTTPS, etc.
	Support local and remote firmware upgrade,import and export configure file.
	Support NTP, RTC embedded.
	Support multiple DDNS provider service.
	Support MAC address cloning.
	WIFI support 802.11b/g/n. support AP, client. (optional)
	WIFI support WEP,WPA,WPA2 encryption. (optional)
	Support multiple online trigger ways, including SMS, ring and data. Support link disconnection when timeout.
	Support APN/VPDN.
	Support multiple DHCP server and DHCP client, DHCP binding MAC address, DDNS, Firewall, NAT, DMZ host, QoS, traffic statistics, real-time display data transfer rate etc.
	Support TCP/IP, UDP, FTP(optional), HTTP, etc.
	Supports SPI firewall, VPN pass-through, access control, URL filtering,etc.
	Support local log storage.
	Support GPS/Beidou (optional).
	Support Dual SIM(optional).

Product Specification

Items		Contents
Hardware System	CPU	Industrial 32 bits CPU
	FLASH	16MB (Extendable to 64MB)
	SDRAM	128MB
Interface	Serial	1 RS232 and 1 RS485, 15KV ESD protection Serial port: 5 PIN industrial terminal, 3.5mm pitch Data bits: 5, 6 ,7, 8 Stop bits: 1, 1.5(optional), 2

		Parity: none, even, odd, space, mark Baud rate: 110~230400 bps Large serial port data cache:10MB
	WAN/LAN	1 10/100Mbps WAN(RJ45,can configurable as LAN) port, auto MDI/MDIX, 1.5KV magnetic isolation protection
	LAN	2 10/100Mbps Ethernet ports(RJ45), auto MDI/MDIX, 1.5KV magnetic isolation protection
	Antenna	Cellular/GPS: Standard SMA female interface, 50 ohm WIFI: Standard SMA male interface, 50 ohm
	SIM/UIM	Standard 3V/1.8V user card interface, 15KV ESD protection
	Power	2 PIN industrial terminal, 3.81mm pitch, reverse-voltage and over voltage protection
	Reset	Press this key for 8 seconds to restore the Router to its original factory default settings
	Indicator	"PWR"、"SIG"、"NET"、"APP" 、"Link"(RJ45)

Router front interface diagram:

Router side interface diagram：

|		
Network	Wireless Network	GSM/GPRS/EDGE: 850/900/1800/1900MHz CDMA: 800/1900MHz WCDMA/HSUPA/HSPA+: 850/900/1900/2100MHz CDMA2000 1x/ EVDO Rev. A: 800/1900MHz TD-SCDMA: 1880-1920/2010-2025MHz(A/F) TDD-LTE:Band 38/39/40/41& Band 61/62 (Private Network) FDD-LTE:Band1/2/3/4/5/7/8/12/13/17/18/19/20/21/25/26/28/66 5G Sub-6: n2/n5/n7/n12/n14/n38/n41/n66/n71/n78 5G UL MIMO: n77/78/79/41

	PPP Protocol	Support PPP Protocol
	PPP Heartbeat	Maintaining links with the cellular network to prevent forced sleep, to ensure the stability of dial-up link.
	Network Authentication	Support CHAP/PAP Authentication
	TCP Heartbeat	Monitor the server connection
WIFI (optional)	Standard	IEEE802.11b/g/n
	Bandwidth	IEEE802.11b/g: 54Mbps (max) IEEE802.11n: 150Mbps (max)
	Security	WEP, WPA, WPA2, etc. WPS (optional)
Power supply	Power range	DC 9~35V, Recommended 12VDC/1.5A
	Communication Current	<500mA (@12VDC)
	Standby Current	<250mA（@12VDC）
Physical	Dimensions	107x98x24mm
	Weight	350g
	Installation	Mount Kit or DIN Rail 35mm (optional)
Environm ental Limits	Operating Temperature	-35~+75ºC (-31~+167℉)
	Storage Temperature	-40~+85ºC (-40~+185℉)
	Operating Humidity	95% (unfreezing)

User Interface

Indicator status description：

Indicator	State	Introduction
Power	OFF	Router is powered off
	ON	Router is powered on
SIG	OFF	The signal is terrible
	BLINK	Signal strength is weak
	ON	Signal strength is good
NET	OFF	SIM/UIM card is not recognized
	BLINK	SIM/UIM card is recognized but not dialed
	ON	Router has logged on network
APP	OFF	Serial port application is closed
	BLINK	Serial port application is connecting

	ON	Serial port application connection is normal
Link(Yellow)	OFF	WAN/LAN is not connected
(,RJ-45)	ON/BLINK	WAN/LAN is connected/ Communicating

Power interface:
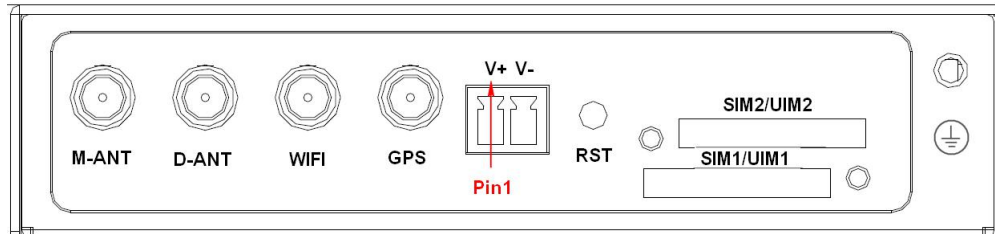
Pin Number	Signal Name	Description
1	V+	Positive power supply
2	V-	Negative power supply

Communication interface definition:
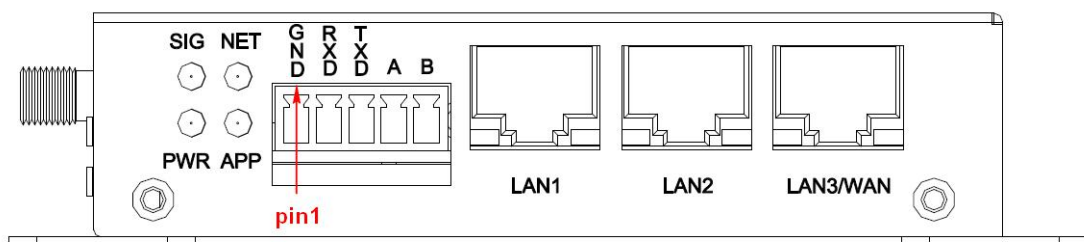
5 pin 3.5mm pitch industrial terminal is defined as follows:

Pin Number	Signal Name	Description
1	GND	System Ground
2	RXD	RS232 Receive
3	TXD	RS232 Transmit
4	A	RS485+（A）
5	B	RS485-（B）

Product accessories:

RS232 Cable (optional)   Cellular antenna（Standard）

Power Terminal (Standard)
(2 pin 3.81mm pitch)

Serial terminal (Standard)
(5 pin 3.5mm pitch)

Adapter (optional)

Network cable（Standard）

35mm Din-rail Buckle (optional)

RS485 Cable (optional)

Reset Button Introduction:

There is a "Reset" button inside the router that to restore the router to its original factory default settings. When user press the "Reset" button for up to 8 seconds, the router will restore to its original factory default settings and restart automatically.

The auto-restart is as follows: The "POWER" indicator turns off for about 10 seconds and then functions normally.