

AR7091 Industrial Gateway Specification

Support 5G/4G/3G/2G and WIFI Wireless Gateway/CPE



AR7091 Gateway is a kind of terminal device that developed based on 5G/4G/3G/2G, WIFI, VPN technology. It adopts high-powered industrial 32-bits CPU and embedded real time operating system. It supports 1 Gigabit Ethernet WAN and 4 Gigabit Ethernet LAN, 1 RS232 (or RS485), and 2.4G/5.8G WIFI port that can conveniently and transparently connect one device to a cellular network, allowing you 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.

Product advantages

- ✓ High-powered industrial 32 bits CPU
- ✓ High-powered industrial cellular module
- ✓ Wide Operating Temperature(-35~+75°C)
- ✓ Power range: DC 9~35V
- ✓ Support hardware and software WDT
- ✓ Support standard RS232(or RS485/RS422), Ethernet and WIFI port that can connect to serial, Ethernet and WIFI devices directly
- ✓ Support auto recovery mechanism, including online detect, auto redial when offline to make it always online
- ✓ Power port: reverse-voltage and over voltage protection
- ✓ Convenient configuration and maintenance interface
- ✓ Support TCP server
- ✓ WIFI support 802.11b/g/n/ac. support AP, client.
- ✓ Support multi data centers and it can support 5 data centers at the same time
- ✓ Support local log storage.
- ✓ Support Python secondary development platform (Python3)
- ✓ Support dual SIM/UIM card (optional)
- ✓ Support dual 4G/5G module (optional)
- ✓ Support GPS/Beidou dual-mode positioning (optional)

Interface description

WAN: 1 Gigabit Ethernet ports(RJ45)
LAN: 4 Gigabit Ethernet ports(RJ45)
User serial: 1 RS232 (or RS485) (RJ45)
Antenna: Standard SMA female interface, 50 ohm
SIM/UIM : Standard 3V/1.8V user card interface, 15KV ESD protection
Power : Standard 3-PIN power jack, reverse-voltage and over voltage protection
Reset Button: Press this key for 8 seconds to restore the module to its original factory default settings
Indicator light: "Signal strength", "PWR", "RUN", "SIM", "Online", "LAN1", "LAN2", "LAN3", "LAN4", "WAN", "APP", "WIFI2.4", "WIFI5.8", "GPS"(optional), "SIM2"(optional)

GPS/BeiDou parameters(optional)

Receiver type(GPS) : 72-channel GPS L1 (1575.42MHz) C/A code
Receiver type(BeiDou): 72-channel Beidou B1I
Position: 2.5m
Max. Update Rate: 18Hz
Accuracy: 0.05m/s

Electrical parameters

Power supply range: DC9~35V (12VDC recommended)
Communication current 1: 390mA @12VDC(One Module)
Communication current 2: 580mA @12VDC(Dual Module)
Max current: <1200mA @12VDC(Dual Module)

Environmental parameters

Operating temperature: -35~+75°C(-31~+167°F)
Storage temperature: -40~+85°C(-40~+185°F)
Relative humidity: 95% (non-condensing)

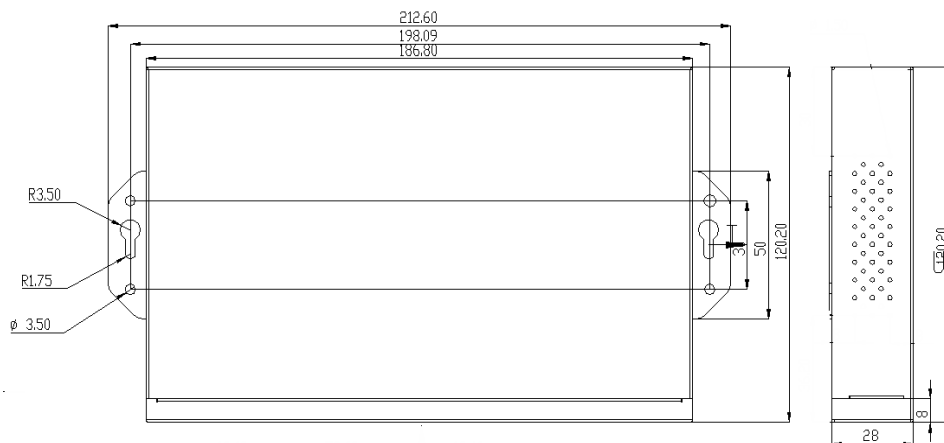
Mechanical parameters

Dimensions: 186.8x120.2x28mm (excluding accessories)
Weight: 720g (excluding accessories)

Supported frequency bands

5G NR SA/NSA: n1/2/3/5/7/8/12/20/28/41/66/71/77/78/79
TDD-LTE: B38/39/40/41
FDD-LTE: B1/2/3/4/5/7/8/13/17/20/25/28
WCDMA: 850/900/1900/2100MHz
TD-SCDMA: 1880-1920/2010-2025MHz(A/F)
CDMA2000 1x/ EVDO Rev. A: 800/1900MHz
GSM/GPRS/EDGE: 850/900/1800/1900MHz
CDMA: 800/1900MHz

Dimension: (Unit: mm)



Applicable Models:

Product Type	Model	Product Name
Standard	AR7091-R	5G Industrial GATEWAY/CPE
	AR7091-A	4G Industrial GATEWAY/CPE
	AR7091-F	4G FDD Industrial GATEWAY/CPE
	AR7091-Q	4G FDD/TDD Industrial GATEWAY/CPE

	AR7091-H	4G Cat1 Industrial GATEWAY/CPE
Dual SIM	AR7091-RS	5G Dual SIM Industrial GATEWAY/CPE
	AR7091-AS	4G Dual SIM Industrial GATEWAY/CPE
	AR7091-FS	4G FDD Dual SIM Industrial GATEWAY/CPE
	AR7091-QS	4G FDD/TDD Dual SIM Industrial GATEWAY/CPE
	AR7091-HS	4G Cat1 Dual SIM Industrial GATEWAY/CPE
GPS	AR7091-RP	GPS +5G Industrial GATEWAY/CPE
	AR7091-AP	GPS+4G Industrial GATEWAY/CPE
	AR7091-FP	GPS+4G FDD Industrial GATEWAY/CPE
	AR7091-QP	GPS+4G FDD/TDD Industrial GATEWAY/CPE
	AR7091-HP	GPS+4G Cat1 Industrial GATEWAY/CPE
GPS+ Dual SIM	AR7091-RSP	GPS+5G Dual SIM Industrial GATEWAY/CPE
	AR7091-ASP	GPS+4G Dual SIM Industrial GATEWAY/CPE
	AR7091-FSP	GPS+4G FDD Dual SIM Industrial GATEWAY/CPE
	AR7091-QSP	GPS+4G FDD/TDD Dual SIM Industrial GATEWAY/CPE
	AR7091-HSP	GPS+4G Cat1 Dual SIM Industrial GATEWAY/CPE
Dual Module	AR7091S-RR	5G Dual Module Industrial GATEWAY/CPE
	AR7091S-AA	4G Dual Module Industrial GATEWAY/CPE
	AR7091S-FF	4G FDD Dual Module Industrial GATEWAY/CPE
	AR7091S-QQ	4G FDD/TDD Dual Module Industrial GATEWAY/CPE
	AR7091S-HH	4G Cat1 Dual Module Industrial GATEWAY/CPE
	AR7091S-RA	5G&4G Dual Module Industrial GATEWAY/CPE
GPS+ Dual Module	AR7091S-RRP	GPS+5G Dual Module Industrial GATEWAY/CPE
	AR7091S-AAP	GPS+4G Dual Module Industrial GATEWAY/CPE
	AR7091S-FFP	GPS+4G FDD Dual Module Industrial GATEWAY/CPE
	AR7091S-QQP	GPS+4G FDD/TDD Dual Module Industrial GATEWAY/CPE
	AR7091S-HHP	GPS+4G Cat1 Dual Module Industrial GATEWAY/CPE
	AR7091S-RAP	GPS+5G&4G Dual Module Industrial GATEWAY/CPE
Commercial	AR7091-N	GATEWAY/CPE