



## AD7028K&AD7028P Industrial IP MODEM Specification

### Support 4G/3G/2G Data Transfer Unit



AD7028K&AD7028P Industrial IP MODEM is a kind of cellular terminal device that developed based on 2G/3G/4G LTE connectivity. It adopts high-powered industrial 32 bits CPU and embedded real time operating system. It supports 2 separate RS232 (or 1 RS232 and 1 RS485) port that can conveniently and transparently connect one device to a cellular network, allowing you to connect to your existing serial devices with only basic configuration.

AD7028K&AD7028P Industrial IP MODEM supports 2G (GPRS/ CDMA), 3G (WCDMA/ HSUPA/HSPA+/CDMA 2000 1x EVDO), 4G (TDD-LTE/ FDD- LTE) network to provide users with comprehensive wireless WAN communication services.

It has been widely used on M2M fields, such as smart power distribution, smart meters, smart dispatching, smart substations, smart urban power grids, smart power generation systems and new energy storage systems, and so on.

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### Product advantages

- ✓ High-powered industrial 32 bits CPU
- ✓ Support auto recovery mechanism, including online detect, auto redial when offline to make it always online
- ✓ High-powered industrial cellular module
- ✓ Wide Operating Temperature(-35~+75°C)
- ✓ Power range: DC 5~35V
- ✓ Support hardware and software WDT
- ✓ Power port: reverse-voltage and over voltage protection
- ✓ Support TCP server
- ✓ Support multi data centers and it can support 5 data centers at the same time
- ✓ Support local log storage.
- ✓ Support dual SIM/UM card (optional)
- ✓ Support GPS positioning (optional)



### Interface description

**User serial:** 2 RS232 (or 1 RS232&1 RS485)  
-- Form: 5PIN 3.5MM pitch industrial terminal and Standard DB9 male connector

**Debug serial:** 1 RS232 --Form: XH3 Female

**Debug switch:** Toggle switch, closed(default)

**Antenna :** Standard SMA female interface, 50 ohm

**SIM/UIM :** Standard clamshell card holder interface

**Power :**Built-in power reverse phase protection and overcurrent, overvoltage protection

**Indicator light:** With “POWER”, “MODULE”, “SIM” and “STATUS” indicator. And a RUN indicator on the motherboard

### GPS parameters

**Receiver type :** 72-channel GPS L1 (1575.42MHz) C/A code

**Position:** 2.5m

**Max. Update Rate:** 18Hz

**Accuracy:** 0.05m/s

### BD parameters

**Receiver type :** 72-channel Beidou B11

**Position:** 3m

**Max. Update Rate:** 18Hz

**Accuracy:** 0.05m/s

### Electrical parameters

**Power supply range:** DC 5~35V (12VDC recommended)

**Sleep current:** <10mA (@12VDC)

**Communication current 1:** <65mA(@12VDC) (LOW mode, 100B/S data transmission)

**Communication current 2:** <80mA (@12VDC) (HIGH mode, 100B/S data transmission)

### 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:** 85x110x32mm (excluding accessories)

**Weight:** 310g (excluding accessories)

### Supported frequency bands

**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

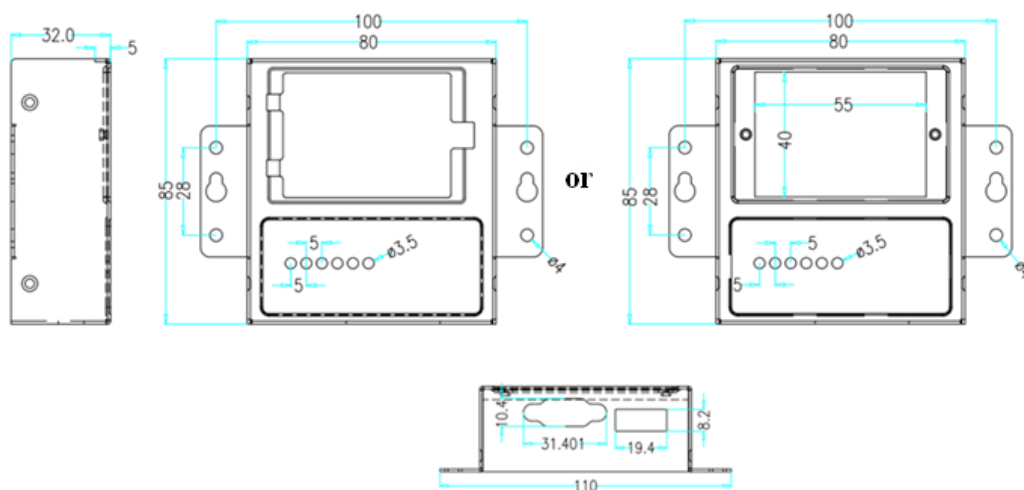
**TD-SCDMA:** 1880-1920/2010-2025MHz(A/F)

**CDMA2000 1x/EVDO Rev. A:** 800/1900MHz

**GSM/GPRS/EDGE:** 850/900/1800/1900MHz

**CDMA:** 800/1900MHz

Dimension: (Unit: mm)



Applicable Models:

User Interface	SIM Cover	Product Type	Model	Product Name
DB9M	Iron	Standard	AD7028K-A	4G Industrial IP MODEM
			AD7028K-F	4G FDD Industrial IP MODEM
			AD7028K-Q	4G FDD/TDD Industrial IP MODEM



		Dual SIM	AD7028K-H	4G Cat1 Industrial IP MODEM
			AD7028K-AS	4G Dual SIM Industrial IP MODEM
			AD7028K-FS	4G Dual SIM FDD Industrial IP MODEM
			AD7028K-QS	4G Dual SIM FDD/TDD Industrial IP MODEM
			AD7028K-HS	4G Dual SIM Cat1 Industrial IP MODEM
		GPS	AD7028K-AP	GPS+4G Industrial IP MODEM
			AD7028K-FP	GPS+4G FDD Industrial IP MODEM
			AD7028K-QP	GPS+4G FDD/TDD Industrial IP MODEM
			AD7028K-HP	GPS+4G Cat1 Industrial IP MODEM
		GPS+ Dual SIM	AD7028K-ASP	GPS+4G Dual SIM Industrial IP MODEM
			AD7028K-FSP	GPS+4G Dual SIM FDD Industrial IP MODEM
			AD7028K-QSP	GPS+4G Dual SIM FDD/TDD Industrial IP MODEM
			AD7028K-HSP	GPS+4G Dual SIM Cat1 Industrial IP MODEM
		RS485	AD7028K-A-R	4G RS485 Industrial IP MODEM(RS485)
			AD7028K-F-R	4G FDD RS485 Industrial IP MODEM(RS485)
			AD7028K-Q-R	4G FDD/TDD RS485 Industrial IP MODEM(RS485)
AD7028K-H-R	4G Cat1 RS485 Industrial IP MODEM(RS485)			
DB9M	Plastic	Standard	AD7028P-A	4G Industrial IP MODEM
			AD7028P-F	4G FDD Industrial IP MODEM
			AD7028P-Q	4G FDD/TDD Industrial IP MODEM
			AD7028P-H	4G Cat1 Industrial IP MODEM
		Dual SIM	AD7028P-AS	4G Dual SIM Industrial IP MODEM
			AD7028P-FS	4G Dual SIM FDD Industrial IP MODEM
			AD7028P-QS	4G Dual SIM FDD/TDD Industrial IP MODEM
			AD7028P-HS	4G Dual SIM Cat1 Industrial IP MODEM
		GPS	AD7028P-AP	GPS+4G Industrial IP MODEM
			AD7028P-FP	GPS+4G FDD Industrial IP MODEM
			AD7028P-QP	GPS+4G FDD/TDD Industrial IP MODEM
			AD7028P-HP	GPS+4G Cat1 Industrial IP MODEM
		GPS+ Dual SIM	AD7028P-ASP	GPS+4G Dual SIM Industrial IP MODEM
			AD7028P-FSP	GPS+4G Dual SIM FDD Industrial IP MODEM
			AD7028P-QSP	GPS+4G Dual SIM FDD/TDD Industrial IP MODEM
			AD7028P-HSP	GPS+4G Dual SIM Cat1 Industrial IP MODEM
		RS485	AD7028P-A-R	4G RS485 Industrial IP MODEM(RS485)
			AD7028P-F-R	4G FDD RS485 Industrial IP MODEM(RS485)
			AD7028P-Q-R	4G FDD/TDD RS485 Industrial IP MODEM(RS485)
			AD7028P-H-R	4G Cat1 RS485 Industrial IP MODEM(RS485)