



## AD7028J&AD7028Q Industrial IP MODEM Specification

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



AD7028J&AD7028Q 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.

AD7028J&AD7028Q 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: 8PIN 3.81MM pitch industrial terminal

**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 over current, overvoltage protection

--Form: 8PIN 3.81MM pitch industrial terminal

**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 B1I

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

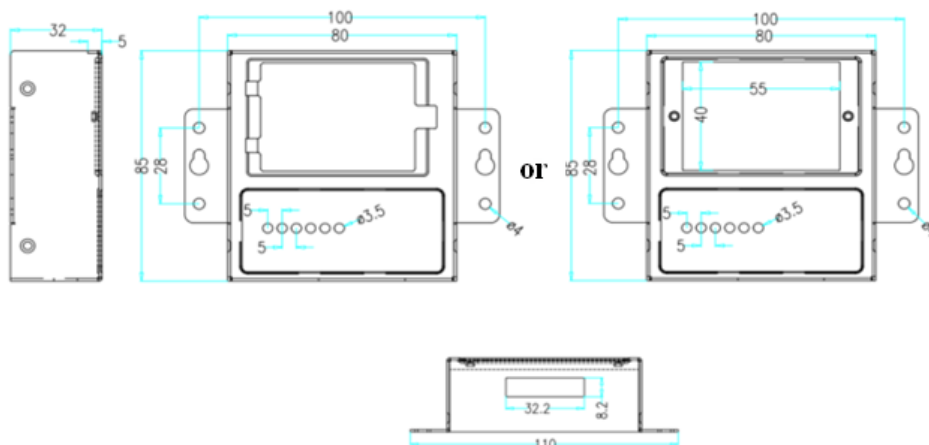
**TD-SCDMA:** 1880-1920/2010-2025MHz(A/F)

**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                   |
|----------------|-----------|--------------|-----------|--------------------------------|
| 8PIN Terminal  | Iron      | Standard     | AD7028J-A | 4G Industrial IP MODEM         |
|                |           |              | AD7028J-F | 4G FDD Industrial IP MODEM     |
|                |           |              | AD7028J-Q | 4G FDD/TDD Industrial IP MODEM |
|                |           |              | AD7028J-H | 4G Cat1 Industrial IP MODEM    |



|               |         |                  |             |                                             |
|---------------|---------|------------------|-------------|---------------------------------------------|
|               |         | Dual SIM         | AD7028J-AS  | 4G Dual SIM Industrial IP MODEM             |
|               |         |                  | AD7028J-FS  | 4G Dual SIM FDD Industrial IP MODEM         |
|               |         |                  | AD7028J-QS  | 4G Dual SIM FDD/TDD Industrial IP MODEM     |
|               |         |                  | AD7028J-HS  | 4G Dual SIM Cat1 Industrial IP MODEM        |
|               |         | GPS              | AD7028J-AP  | GPS+4G Industrial IP MODEM                  |
|               |         |                  | AD7028J-FP  | GPS+4G FDD Industrial IP MODEM              |
|               |         |                  | AD7028J-QP  | GPS+4G FDD/TDD Industrial IP MODEM          |
|               |         |                  | AD7028J-HP  | GPS+4G Cat1 Industrial IP MODEM             |
|               |         | GPS+<br>Dual SIM | AD7028J-ASP | GPS+4G Dual SIM Industrial IP MODEM         |
|               |         |                  | AD7028J-FSP | GPS+4G Dual SIM FDD Industrial IP MODEM     |
|               |         |                  | AD7028J-QSP | GPS+4G Dual SIM FDD/TDD Industrial IP MODEM |
|               |         |                  | AD7028J-HSP | GPS+4G Dual SIM Cat1 Industrial IP MODEM    |
|               |         | RS485            | AD7028J-A-R | 4G RS485 Industrial IP MODEM(RS485)         |
|               |         |                  | AD7028J-F-R | 4G FDD RS485 Industrial IP MODEM(RS485)     |
|               |         |                  | AD7028J-Q-R | 4G FDD/TDD RS485 Industrial IP MODEM(RS485) |
|               |         |                  | AD7028J-H-R | 4G Cat1 RS485 Industrial IP MODEM(RS485)    |
| 8PIN Terminal | Plastic | Standard         | AD7028Q-A   | 4G Industrial IP MODEM                      |
|               |         |                  | AD7028Q-F   | 4G FDD Industrial IP MODEM                  |
|               |         |                  | AD7028Q-Q   | 4G FDD/TDD Industrial IP MODEM              |
|               |         |                  | AD7028Q-H   | 4G Cat1 Industrial IP MODEM                 |
|               |         | Dual SIM         | AD7028Q-AS  | 4G Dual SIM Industrial IP MODEM             |
|               |         |                  | AD7028Q-FS  | 4G Dual SIM FDD Industrial IP MODEM         |
|               |         |                  | AD7028Q-QS  | 4G Dual SIM FDD/TDD Industrial IP MODEM     |
|               |         |                  | AD7028Q-HS  | 4G Dual SIM Cat1 Industrial IP MODEM        |
|               |         | GPS              | AD7028Q-AP  | GPS+4G Industrial IP MODEM                  |
|               |         |                  | AD7028Q-FP  | GPS+4G FDD Industrial IP MODEM              |
|               |         |                  | AD7028Q-QP  | GPS+4G FDD/TDD Industrial IP MODEM          |
|               |         |                  | AD7028Q-HP  | GPS+4G Cat1 Industrial IP MODEM             |
|               |         | GPS+<br>Dual SIM | AD7028Q-ASP | GPS+4G Dual SIM Industrial IP MODEM         |
|               |         |                  | AD7028Q-FSP | GPS+4G Dual SIM FDD Industrial IP MODEM     |
|               |         |                  | AD7028Q-QSP | GPS+4G Dual SIM FDD/TDD Industrial IP MODEM |
|               |         |                  | AD7028Q-HSP | GPS+4G Dual SIM Cat1 Industrial IP MODEM    |
|               |         | RS485            | AD7028Q-A-R | 4G RS485 Industrial IP MODEM(RS485)         |
|               |         |                  | AD7028Q-F-R | 4G FDD RS485 Industrial IP MODEM(RS485)     |
|               |         |                  | AD7028Q-Q-R | 4G FDD/TDD RS485 Industrial IP MODEM(RS485) |
|               |         |                  | AD7028Q-H-R | 4G Cat1 RS485 Industrial IP MODEM(RS485)    |