

## AD7028A(Z) Industrial IP Modem Specification

Support 5G/4G/3G/2G Industrial Data Transfer Unit



AD7028A(Z) Industrial IP MODEM is a kind of cellular terminal device that developed based on 5G/4G/3G/2G connectivity. It adopts high-powered industrial 32 bits CPU and embedded real time operating system. It supports 1\*RS232 and 1\*RS485 port (optional 2\*RS232 or 2\*RS485), 1\*Ethernet port that can conveniently and transparently connect one device to a cellular network. It is support wide power range 9-60V DC. With a compact and robust design, it includes the necessary accessories for Mount kit or DIN rail.

It has been widely used on M2M fields, such as intelligent transportation, smart grid, industrial automation, telemetry, finance, POS, water supply, environment protection, post, weather, and so on.

### 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 9~60V
- ✓ Support hardware and software WDT
- ✓ Power port: reverse-voltage and over voltage protection
- ✓ Support TCP server
- ✓ Support ModbusRTU/TCP
- ✓ Support 101/104 protocol
- ✓ Support multi data centers and it can support 5 data centers at the same time
- ✓ Embedded standard TCP/UDP protocol, supporting transparent data transmission
- ✓ Support local log storage.
- ✓ Support hardware encryption/decryption (optional)
- ✓ Support dual SIM/UIM card (optional)
- ✓ Support GPS positioning (optional)

### Interface description

**Serial ports:** 1 RS232 and 1 RS485 (optional 2 RS232 or 2 RS485)

-- Form: 8pin 3.5mm pitch industrial terminal

**Debug serial:** 1 USB-Form:USB Type-C.Can be directly connected to PC for debugging.

**Ethernet:** one 10/100Mbps Ethernet ports(RJ45)

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

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

**Power :** 1 main power supply

--Form: 2PIN 3.81MM pitch industrial terminal

**Wake up button:** Tact switch

**Indicator lights:** POWER, MODULE, SIM, STATUS

### GPS parameters(optional)

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

**Position:** 2.5m

**Max. Update Rate:** 18Hz

**Accuracy:** 0.05m/s

### Electrical parameters

**Power supply range:** DC 9~60V (12VDC recommended)

**Communication current(4G) :** 85mA@12VDC (Middle mode, Ethernet 255bps data transmission)

**Communication current(5G) :** 120mA@12VDC (Middle mode, Ethernet 255bps 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

**Shell Material:** Iron

**Dimensions:** 110x85x32mm (excluding accessories)

**Weight:** approximately 330g (excluding accessories)

**Installation:** Mount Kit or DIN Rail35mm (optional)

### 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

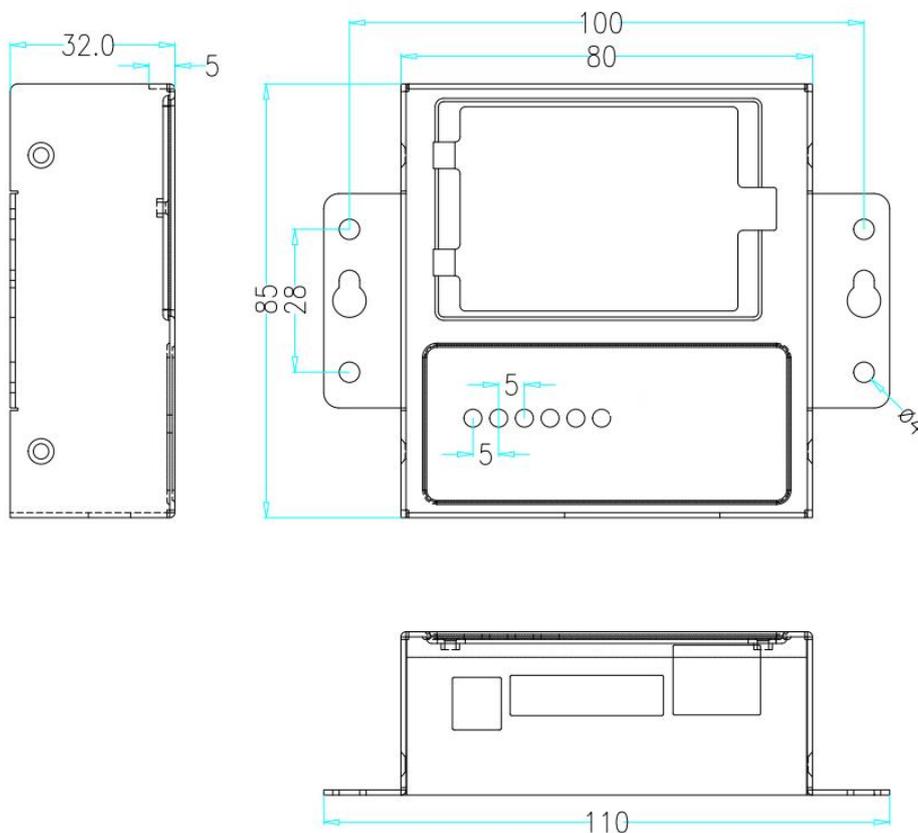
**TD-SCDMA:**1880-1920/2010-2025MHz(A/F)

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

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

**CDMA:**800/1900MHz

Dimension: (Unit: mm)



**Applicable Models:**

<b>Product Type</b>	<b>Model</b>	<b>Product Name</b>
Standard	AD7028A(Z)-R	5G Industrial IP MODEM
	AD7028A(Z)-L	5G Redcap Industrial IP MODEM
	AD7028A(Z)-A	4G Industrial IP MODEM
	AD7028A(Z)-F	4G FDD Industrial IP MODEM
	AD7028A(Z)-Q	4G FDD/TDD Industrial IP MODEM
	AD7028A(Z)-H	4G Cat1 Industrial IP MODEM
Dual SIM	AD7028A(Z)-RS	5G Dual SIM Industrial IP MODEM
	AD7028A(Z)-LS	5G Redcap Dual SIM Industrial IP MODEM
	AD7028A(Z)-AS	4G Dual SIM Industrial IP MODEM
	AD7028A(Z)-FS	4G FDD Dual SIM Industrial IP MODEM
	AD7028A(Z)-QS	4G FDD/TDD Dual SIM Industrial IP MODEM
	AD7028A(Z)-HS	4G Cat1 Dual SIM Industrial IP MODEM
GPS	AD7028A(Z)-RP	GPS+5G Industrial IP MODEM
	AD7028A(Z)-LP	GPS+5G Redcap Industrial IP MODEM
	AD7028A(Z)-AP	GPS+4G Industrial IP MODEM
	AD7028A(Z)-FP	GPS+4G FDD Industrial IP MODEM
	AD7028A(Z)-QP	GPS+4G FDD/TDD Industrial IP MODEM
	AD7028A(Z)-HP	GPS+4G Cat1 Industrial IP MODEM
GPS+ Dual SIM	AD7028A(Z)-RSP	GPS+5G Dual SIM Industrial IP MODEM
	AD7028A(Z)-LSP	GPS+5G Redcap Dual SIM Industrial IP MODEM
	AD7028A(Z)-ASP	GPS+4G Dual SIM Industrial IP MODEM
	AD7028A(Z)-FSP	GPS+4G FDD Dual SIM Industrial IP MODEM
	AD7028A(Z)-QSP	GPS+4G FDD/TDD Dual SIM Industrial IP MODEM
	AD7028A(Z)-HSP	GPS+4G Cat1 Dual SIM Industrial IP MODEM
Dual RS485	AD7028A(Z)-R-R	5G Dual RS485 Industrial IP MODEM
	AD7028A(Z)-L-R	5G Redcap Dual RS485 Industrial IP MODEM
	AD7028A(Z)-A-R	4G Dual RS485 Industrial IP MODEM
	AD7028A(Z)-F-R	4G FDD Dual RS485 Industrial IP MODEM
	AD7028A(Z)-Q-R	4G FDD/TDD Dual RS485 Industrial IP MODEM
	AD7028A(Z)-H-R	4G Cat1 Dual RS485 Industrial IP MODEM
Dual RS232	AD7028A(Z)-R-2T	5G Dual RS232 Industrial IP MODEM
	AD7028A(Z)-L-2T	5G Redcap Dual RS232 Industrial IP MODEM
	AD7028A(Z)-A-2T	4G Dual RS232 Industrial IP MODEM
	AD7028A(Z)-F-2T	4G FDD Dual RS232 Industrial IP MODEM
	AD7028A(Z)-Q-2T	4G FDD/TDD Dual RS232 Industrial IP MODEM
	AD7028A(Z)-H-2T	4G Cat1 Dual RS232 Industrial IP MODEM