GSM 3G 4G LTE Cellular IoT Gateway

KING PIGEON

Model List

Model	GSM/3G/4G	AI/DIN/DO	TH	RS485	Ethernet	SD Card	Extend I/O tags			
							Boolean	16-Bit	32-Bit	64-Bit
S173	√	×	1	2	×	8G	64	64	×	×
S174	√	×	1	2	×	8G	64	128	32	×
S175	√	×	1	2	×	8G	64	128	64	64
S372	√	×	1	2	1	8G	×	×	×	×
S373	√	×	1	2	1	8G	64	64	×	×
S374	√	×	1	2	1	8G	64	128	32	×
S375	√	×	1	2	1	8G	64	128	64	64
S175E	×	×	1	2	×	8G	64	128	64	64
S375E	×	×	1	2	1	8G	64	128	64	64
Notice	1. Default version is GSM/GPRS module inside. 2. For 3G WCDMA, 4G LTE version, please tell our sales where would you like to use them. 3. The S175 ,375E series has no communication module, so it can't call and SMS to alarm.									

Cellular IoT Gateway Working Diagram S375
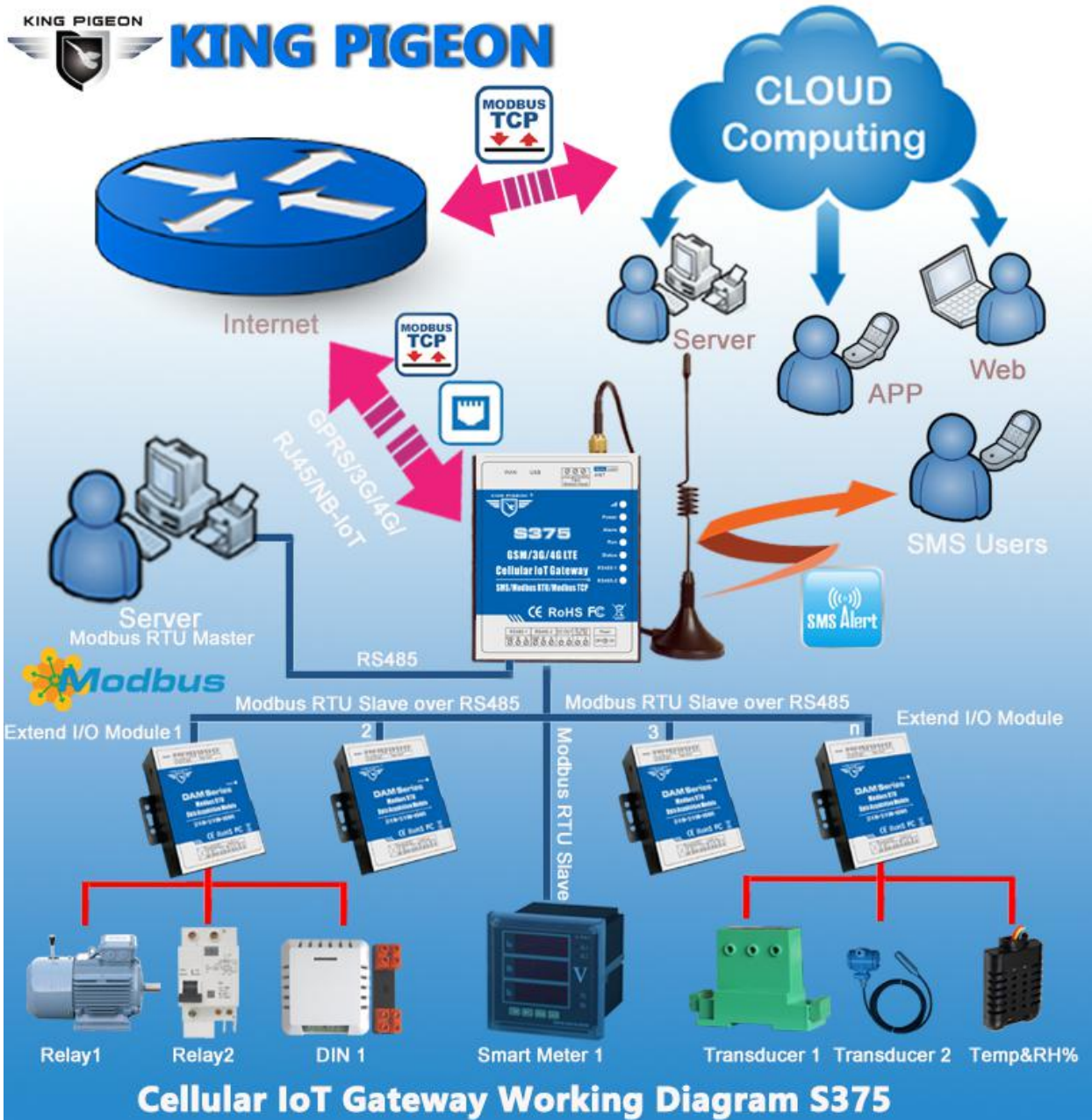
1. Brief introduction

The Cellular IoT Gateway S17X/S37X is an industrial class, high reliability, high stability, and programmable Remote Terminal Unit (RTU).   It embedded 32-Bit High Performance Microprocessor MCU, inbuilt industrial Cellular module. It provides 1 ambient sensor input for monitoring onsite temperature and humidity, and RS485 serial port, supports 128/224/320 mapping registers via Modbus RTU protocol. It can monitor and operate the I/O ports by SMS, APP, Web Server, internet, timers and programmed inter-lock events automatically.

The Cellular IoT Modbus Gateway S17X/S37X inbuilt TCP/IP protocol stack make it suitable for internet of things (IoT) applications, it can be easily to operate by the provided cloud, app, and web server, or integrated to you IoT applications according to Ethernet or the TCP/UDP protocol, or integrated to SCADA systems by standard Modbus TCP protocol, too. This is very useful if you need remote control onsite devices with low cost solution.

The Cellular IoT Modbus Gateway S17X/S37X is designed for working in the harsh industrial application environment, widely used in a variety of industrial automation, security monitoring system, automatically measurement and control system, BTS monitoring, remote data acquisition, telemetrically systems, automatically control system. It can be used as a remote RS485 data transmission, remote extend I/O tags control, remote smart PLC, meters monitoring.

The Cellular IoT Modbus Gateway S17X/S37X supports 2 RS485 transparent data transmission and performs as Modbus Slave over GPRS/3G/4G/NB-IoT network and RS485 serial port. Moreover, the Cellular IoT Modbus RTU can be used as Modbus RTU Master to reading smart meters, I/O modules, PLC, and converts to SMS alert once triggered the threshold value, or transmit data to remote server over GPRS/3G/4G/NB-IOT network. 2 RS485 ports can be used one as Modbus RTU Master and the other as Slave at the same time.

Typically applications:

BTS Monitoring, Security Alarm System applications, Supervision and monitoring alarm systems, Automatic monitoring system, Vending Machines security protection, Pumping Stations, Tanks, Oil or Water levels, Buildings and Real Estate, Weather Stations, River Monitoring and Flood Control, Oil and gas pipelines, Corrosion protection, Temperatures, water leakage applications, Wellheads, boat, vehicle, Energy saving, street lights control system, Valve controls, Transformer stations, Unmanned machine rooms, Control room application, Automation System, M2M, etc.

2.Safety Directions

Safe Startup
Do not use the unit when using GSM/3G/4G equipment is prohibited or might bring disturbance or danger.
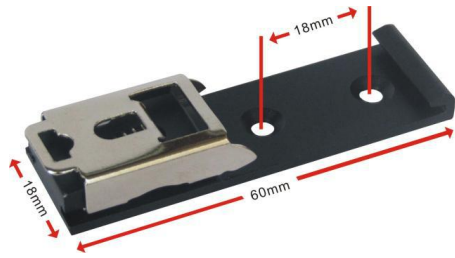
Interference
All wireless equipment might interfere network signals of the unit and influence its performance.

3. Standard Packing List

Gateway X1; AC/DC Adaptor X1; GSM/3G/4G Antenna X1;User Manual X1; PC Configurator X1 .
Note: The package does not include any SIM card.

Optional: 35mm Standard DIN rail fixed Bracket

35mm DIN Rail Fixed Bracket

4. Features and Specification

4. 1 Mainly Features

➢ GSM/GPRS/3G/4G network communication, can be operated from anywhere, no distance limitation;

➢ Wide range power supply 9~36VDC with over voltage and phase-reversal protection;

➢ Embedded ARM® Cortex™ -M4 32 Bit RISC Core, 168 MHz inside, RTOS system, reliable performance with in-built watchdog;

➢ 1 temperature & humidity sensor input for monitoring onsite environment, the sensor model is AM2301, Measures temperatures from -40-80°C,0.5°C accuracy, Relative Humidity from 0-99RH%, accuracy is 3%;

➢ Inbuilt 8G SD card to save up to tens of thousands historical data and events;

➢ Supports dual sim card,improve communication quality;

➢ 2 RS485 port supports Modbus RTU Master and Slave, can be used to extend I/O ports or meters;

➢ Powerful SMS function: Threshold high SMS alert, SMS set, SMS inquiry, SMS command for Modbus PLC..., and SMS monitoring communication with Slaves;

➢ Provides 1 channel 9~36VDC power source output for external device, saving wiring cost;

➢ Automatically resend the data while communication interrupt or failure, and failure will alert by SMS text to users;

➢ Supports remotely restart the RTU, and configure& operate it by SMS commands remotely;

➢ 10 SMS Alert and auto dial numbers for receiving alarm message, can program to receive specified alarm message;

➢ Inbuilt inter-lock logic programmer and powerful timer program function;

➢ Modular structure design, replace a module can upgrade the network from 2G to 3G/4G or 3G to 4G;

➢ Support SMS, dial, GPRS, 3G , 4G network for alert, USB port for configuration and upgrade firmware;

➢ Inbuilt large capacity automatically rechargeable backup battery, alert when external power failure;

➢ Support TCP/UDP, Modbus TCP, Modbus RTU over TCP, King Pigeon IoT RTU protocol and data transparent transmission function;

➢ Using metal shell, protection class IP30. Metal shell and system security isolation, especially suitable for industrial applications in the field;

➢ L70 * W88 * H30mm, compatible wall installation and DIN35mm industrial rail installation.

4. 2 Specifications

Item	Reference Scope
DC Power supply	Standard adapter: DC 12V/1.5A Range 9-36VDC
Power consumption	Standby:12V/70mA; Working Max.: 12V/300mA
GSM Frequency	850/900/1800/1900Mhz
3G/4G/NB-lot	Optional: WCDMA/TDD-LTE/FDD-LTE/NB-IoT
TCP/IP stack	TCP,UDP
SIM interface	Dual SIM Card,supporting 3V and 1.8V SIM Card
External antenna	SMA Antenna interface, 50 Ohm, Gain: 3dB
Serial Interfaces	1 USB Port
Protocols	SMS, GPRS UDP,TCP, Modbus RTU, Modbus TCP and more equipment protocols can be added according to requirements.
Ethernet (only for S37X)	1 RJ45 Ethernet port for connect internet, WAN or LAN.
RS485	2 RS485, Support Transparent transmission and Modbus RTU Slave, Modbus RTU Master.
Temp.&Hum Inputs	Temperature range: -40°C to +80°C, Humidity Range: 0~100%RH;
Power Outputs	1 Port, for external device;
Mapping Registers	Max.320
Memory Capacity	Internal 8G SD card inside, can save the data for 100000events.
Backup Battery	3.7V 1200mAH
Temperature range	-10°C ~ +70 °C
Humidity range	Relative humidity 95% (condensation free)
Exterior dimension	70mm*88mm*30mm
Net Weight	500g

The End!

Any questions please help to contact us feel free.

Http://www.4G-RTU.com