RAISECOM

Raisecom Technology Co., Ltd

Gazelle G512i

The G512i industrial IoT gateway (hereinafter referred to as the G512i) transmits data from a large number of industrial devices in different areas to the remote cloud center for device monitoring, device diagnosis, program maintenance, and fault alarm, providing users with a simple and reliable remote transmission solution of industrial Internet data for industrial mutual control, device diagnosis, program maintenance and fault alarm.

The G512i adopts the ARM hardware platform and a fanless industrial rail-mounting design, and is dustproof and vibration-proof. It provides Ethernet interface, RS485 serial interface, and Wi-Fi for accessing user services. Its built-in large-capacity storage supports long-time data buffering in offline state. In the uplink, the G512i adopts the 2G/3G/4G high-speed wireless network or Lora as the data bearer network, which supports multiple network standards, such as FDD/TDD/WCDMA/GPRS/CDMA2000.

The G512i runs the Linux operating system, which allows users to run a variety of extensive applications of self-developed applications to implement edge computing. The G512i can access the cloud platform and supports MQTT and AMQP, implementing terminal device management and status monitoring. In addition, it supports Modbus terminal accessing, implementing the conversion and accessing of the Modbus RTU and Modbus, and can dumps and analyzes the user data collected.

Highlights>>

- High industrial protection level, ensuring long-term and stable operation of the device
- Offline cache of data, up to 1-month data
- Multiple network modes, supporting 2G/3G/4G networks of carriers and self-built Lora networks
- Multiple pre-configured cloud access capabilities, supporting PaaS networking
- Container technology, facilitating secondary development for customers
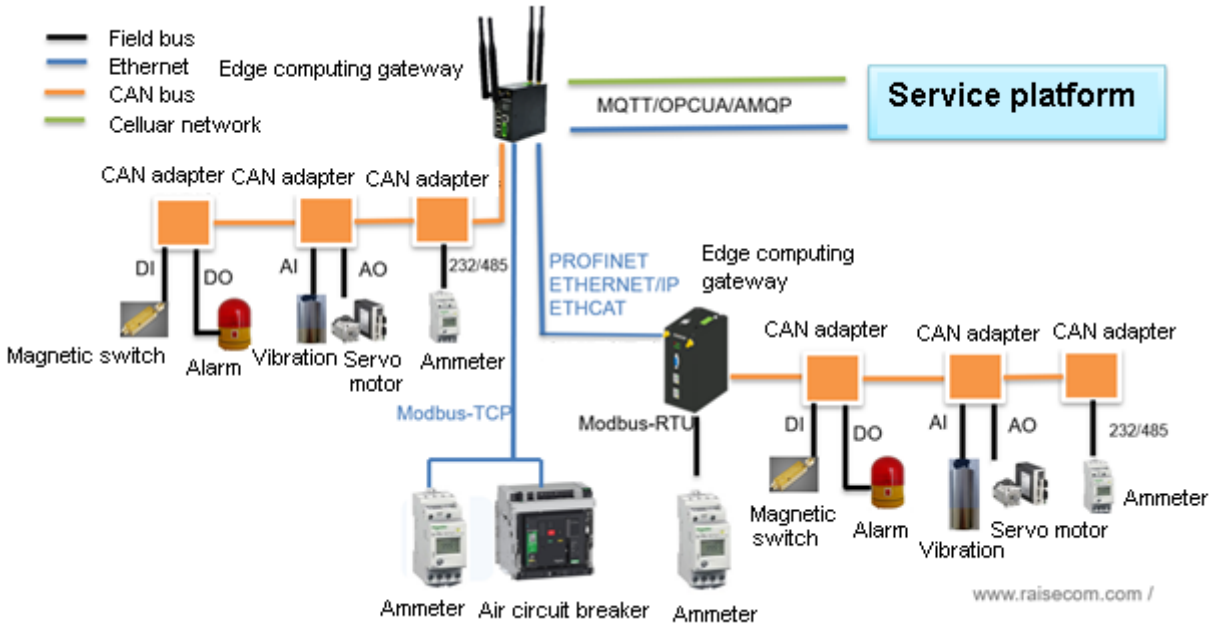
Application >>

Figure 1 Terminal IoT solution in industrial field

Terminal IoT solution in industrial field

The industrial IoT gateway accesses various industrial field devices through its rich forms of interfaces and fieldbus protocols, and implements protocol parsing, data collection, and data cleaning through its own computing capabilities; it also supports edge computing to run self-contained scripts and programs of users as required, and implements local response and processing of the front-end data. At the same time, it can report the collected data to the cloud platform through the northbound MQTT/AMQP protocol according to the specified requirements.

Key features >>

Feature	Sub-feature	Description
Hardware performance	CPU	ARM Cortex-A7 single-core 528Mhz
	Memory	512MB DDR3L

	FLASH	1GB Nandflash
Interfaces	Serial interface	Two 4-pin RS485
	Ethernet interface	Two 100 Mbit/s RJ45 interfaces
	Wi-Fi	802.11n 1x1
	4G	4G/3G/2G networks
	SIM card	Mirco SIM card
	TF card	Up to 128 GB
	Power interface	24 VDC
Appearance	Dimension	56*135*105 mm
	Antenna	2*SMA; 1*RSMA
	LED	PWR, SYS, 4G, WIFI, Signal, ALARM, R1,R2
	Protection grade	IP40
	Operating temperature	-25 to +70℃
Software	IOT	MQTT MODBUS TCP/RTU
Compliance standard	IEC61000-4-2 (ESD): ±6 kV contact discharge, ±8 kV air discharge IEC61000-4-3 (RS-): 10V/m (80–1000 MHz) IEC61000-4-4 (EFT): power cable: ±2 kV; data cable: ±2 kV (5 kHz, 100 kHz) IEC61000-4-5 (Surge): power cable: CM±2kV/DM±1kV; data cable: CM±2kV IEC61000-4-6 (RF Conducted Immunity): 10V (150 kHz–80 MHz) IEC61000-4-8 (Power Frequency Magnetic Field Immunity): 100A/m continuous; 1000A/m ,1s to 3s IEC61000-4-9 (pulse magnetic field): 300A/m IEC61000-4-10 (damped oscillation magnetic field): 30A/m@1MHz IEC61000-4-12/18 (oscillation wave): CM 2.5 kV, DM 1 kV FCC Part 15/CISPR22 (EN55022): Class A IEC61000-6-2 (general industrial standards)	

	IEC60068-2-6 (anti-vibration)
	IEC60068-2-27 (anti-shock)
	IEC60068-2-32 (free falling)
	CE, FCC, ROHS, certification by State Grid Corporation of China, certification by China Electric Power Research Institute, and Network Access License for Telecommunications Equipment (Ministry of Industry and Information Technology, P.R.C)

Ordering information >>

G512i-2FE2R-W	• 2 FE Ethernet interfaces • 2 RS485 interface
G512i-U-2FE2R-W-33	• 2G/3G/4G wireless network bands • 2 FE Ethernet interfaces • 2 RS485interfaces • 150M 802.11n Wi-Fi