CM510-72X

Product Introduction

This product adopts ARM9 industrial-grade high-performance embedded processor, takes real-time operating system as the software supporting platform, with super-large memory and embedded TCP/IP protocol stack with independent intellectual property rights. The device supports double-data center backup and multi-data center synchronous receiving data and support sending Alarm SMS; The equipment provides online maintenance technology to keep the data terminal permanently online, keep the data link unblocked at any time, and realize high-speed, stable and reliable TCP/UDP transparent data transmission function.

This product has been widely used in power centralized meter reading, water meter centralized meter reading, heat network monitoring, gas monitoring, water conservancy monitoring, environmental protection testing, meteorological testing, earthquake monitoring, traffic control and other industries.

Model No.

Model No.	Interface Type	Network	RS232	RS485	Data Cache
CM510-72F	Terminal Interface	4G	Support	Support	8K
CM510-72R	Terminal Interface	5G	Support	Support	8K

Technical Parameters

Device Interface Diagram

CM510-72X Accessories

Power Connector	RS232 Serial Cable	Antenna

Model NO.	CM510-72X
Cellular Parameters	
Network	LTE-FDD/HSPA+/UMTS/HSDPA/HSUPA/WCDMA/EDGE/GSM
Standards and Frequency Bands	EGSM 900 Power Class 4 2 W, 33 dBm
	GSM 1800 / 1900 Power Class 1 1 W, 30 dBm
	EDGE Power Class for 900MHz Class E21 27 dBm, 0.5 W
	EDGE Power Class for 1800 / 1900MHz Class E21 26 dBm, 0.4 W
	Others. (It depends on area and country.)
Coding Scheme	HSPA+/ DC-HSPA+ / GPRS / EDGE
Communication Bandwidth	100 Mbps DL within 20 MHz bandwidth (Peak DL data rate in 10 MHz bandwidth: 70 Mbps (approx.) for Cat 3 device)
Transmit Power	50 Mbps UL within 20 MHz bandwidth
Receiver Sensitivity	<24dBm
Cellular Parameters	
Network	5G NR/LTE/HSPA+

Wireless Module	Adopt industrial-grade wireless module
Standards and Frequency Bands	5G NR:n1/n2/n3/n5/n7/n8/n20/n28/n41/n66/n71/n77/n78/n79 LTE:b1/b2/b3/b4/b5/b7/b8/b12/b13/b14/b17/b20/b25/b26/b28/b29/ b30/b38/b39/b40/b41/b42/b43/b46/b48
Theoretical bandwidth	5G NR: DL 3.4Gbps, UL: 350Mbps LTE Cat20: DL 2.0Gbps, UL: 150Mbps HSPA+: DL 42Mpbs, UL: 5.76Mbps
Transmit Power	<23dBm
Receiver Sensitivity	<-97dBm
Serial Port Parameters	
Data Bit	8
Stop Bit	1/1.5/2
Parity Bit	No parity / Odd parity / Even parity
Serial Speed	300bps ~ 115200bps
Flow Control	None flow control
Interface	1* RS485 interface, 1* RS232 communication interface, 1* RS232 debugging interface
Interface	
Indicator	Power / ACT / Online
Antenna Interface	Standard SMA female interface,50ohm; optional 3M/5M/10M/15M antenna extension cable, meet the different needs of customers.
UIM Interface	1.8V/3V/5V standard putter user card interface, built-in 15KV ESD protection.
Power Interface	Standard 3-pin power jack.
Enable Pin	Support customer to control power up and down of equipment.
Power Supply	
Supply Voltage	DC6V to 32V. Over-voltage protection. Power reverse protection.
Standard Power Supply	DC9V/1500mA
Average Communication Current	80mA@+9VDC
Communicating Instantaneous Peak Current	1.0A@+9VDC
Standby Current	<34mA@+ 9VDC
Operation System	
OS	Linux
Physical Features	
Shell	Metal shell: metal case, anti-radiation, anti-interference; shell and system security isolation, lightning protection design; meet the power requirements of safety regulations; protection rating IP41; particularly suit for harsh industrial control environments.
Product Dimension	100*62*24 mm(Antenna and fixer are not included)
Package Size	298*226*60mm
Weight	0.41kg
Other Parameters	
Operating Temperature	-25ºC ~ +65ºC

Extended Operating Temperature	-35ºC ～ +75ºC	
Storage Temperature	-40ºC ～ +85ºC	
Relative Humidity	95%(No condensation)	

Terminal Interface Definition	
Interface Drawing	9V GND 485A 485B RX TX GND DRX DTX SW IO1 IO2 IO3 IO4

NO.	Name	Function	Default Function	Input / Output	Electrical Characteristics
1	Power	Power	Power supply + pole	-	Power supply range: 6V - 32V
2	GND		Power ground	-	GND
3	485A	RS485	RS485 interface A	-	-
4	485B		RS485 interface B	-	-
5	RXD	RS232(used to transmit data, configure or download)	RS232 interface, receiver pin (assuming that DTU is connected to the computer, the flow direction of this pin is: DTU <- computer)	Input	-
6	TXD		RS232 interface, sender pin (assuming DTU is connected to the computer, the data flow of this pin is: DTU -> computer)	Output	-
7	GND	RS232	RS232 interface, GND pin	-	-
8	DRX	RS232(used to debug)	RS232 interface, receiving pin	Input	-
9	DTX		RS232 interface, sending pin	Output	-
10	SW	Enable pin	Enable pin	Input	When the input voltage of 0V DTU power supply is cut off; When suspended or input high level, DTU power is connected.
11	IO1	IO	Switch measure and control	Input & Output	IO control, IO alarm
12	IO2			Input & Output	IO control, IO alarm
13	IO3			Input & Output	IO control, IO alarm
14	IO4			Input & Output	IO control, IO alarm

Installation Dimension

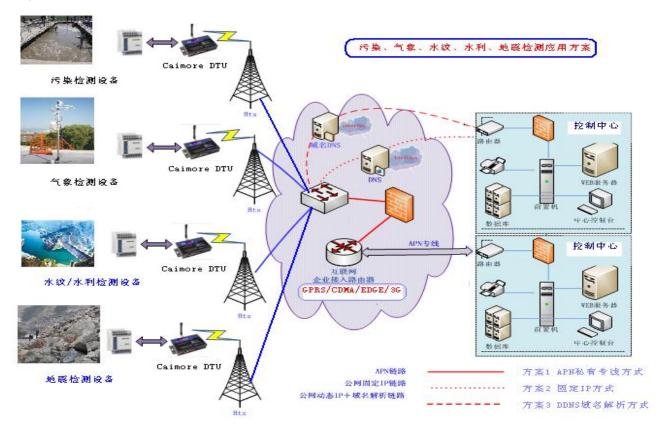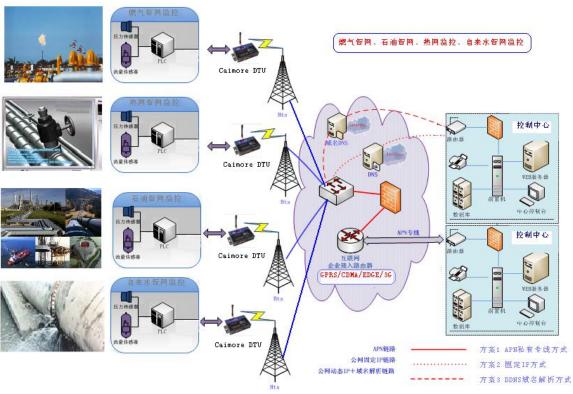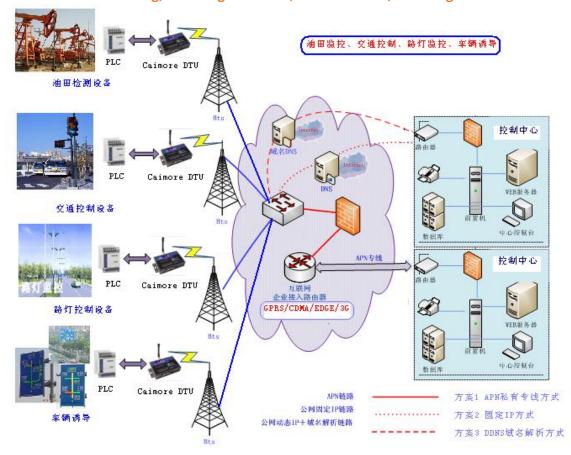# Product Application

1. Application in detection industry (pollution, weather, watermark, water conservancy, earthquake, etc.)
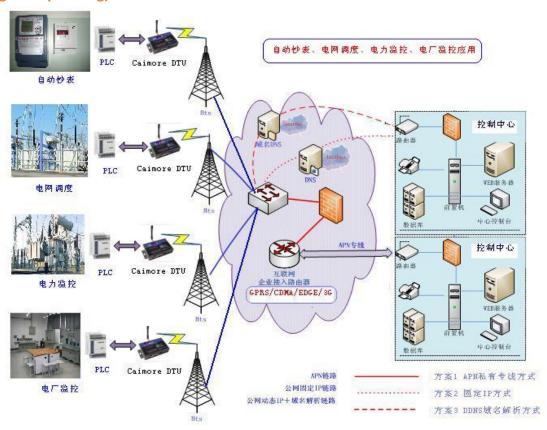

2. Network management monitoring industry application (gas pipe network, oil pipe network, heating network monitoring, tap water pipe network monitoring, etc.)

3. Oilfield monitoring, street light control, traffic control, vehicle guidance

4. Power industry application cases (distribution monitoring, grid automation, automatic meter reading, grid dispatching)

Typical application

Power Industry
- Street lamp monitoring
- Meter monitoring
- Computer room monitoring
- Automatic remote control system for power distribution network
- Remote meter reading

Transportation Industry
- Traffic instructions
- Vehicle induction
- Highway monitoring
- Traffic light control and photo transmission

Water conservancy industry
- Water conservancy monitoring
- Real-time transmission monitoring of water supply network

Environment, meteorology, oil field and other industries
- Monitoring of key pollution sources
- Environmental monitoring
- Weather monitoring
- Real-time noise monitoring
- Oilfield monitoring
- Heat network monitoring
- Coal monitoring
- Earthquake monitoring
- All kinds of PLC with serial port or 485 interface;
- DTU realizes wireless data transmission

Corporate Qualification

Item	Content
	2011, it was rated as "the best supplier for customer satisfaction in China's industrial control industry"; the company's GPRS DTU product was rated as "innovative product award".
	2012, the company became a member of "China Quality Travel".
	2013, the company became a member of the "Technical Innovation Strategic Alliance of Intelligent Power Transmission and Distribution Equipment Industry".
	2014, it was rated as an innovative pilot enterprise .
	2014, the company's Zhanjiang Wi-Fi coverage project was awarded the "Sample Engineering Award" by the 13th China Automation Annual Conference.
	2015, its video products were rated as "Top Ten Video Transmission Enterprises" by China's industrial control industry.

Corporate Honor	2015, the noise monitoring project was awarded the "Sample Project Award" by the 14th China Automation Annual Conference. 2015, its video products were rated as "Top Ten Video Transmission Enterprises" by Huaqiang Security Network. 2016, the video products was rated by Huaqiang Security Network as "2015-2016 High-quality Supplier in China's Security Industry". 2016, it was rated as the "best supplier of charging equipment parts" by charging pile communication equipment. 2016, won the " Product Gold Award of 2016 7th Guangzhou International New Energy Automobile Industry Exhibition ". 2016, The 3rd China Good Wi-Fi Organizing Committee awarded Caimore "2016 Best Wi-Fi Industry Application Solution Provider". 2018, the company's industrial router was rated as "China's Top Ten Industrial Router Brands", and DTU was rated as "China's DTU Top Ten Brands" 2018, it was rated as a key listed reserve enterprise in Xiamen City. 2019, it was rated as a key listed reserve enterprise in Xiamen City. 2019, it was rated as a key listed reserve enterprise in Fujian Province. 2019, Shortlisted for China Telecom Corporation Limited, DICT solution partner of Shanghai branch 2020, Selected as a key listed reserve company in Xiamen
High-tech Enterprise	2009, it was recognized as a high-tech enterprise by the country
Double-soft Enterprise	2010, it was recognized as a double-soft enterprise by the country
Occupational Health and Safety Management System Certification	ISO9001:2015 quality management system conforms to the standard ISO14001:2015 environmental management system conforms to the standard ISO45001:2018 occupational health and safety management system conforms to the standard
Copyright	The company has 7 patented technology certificates to maintain equipment stability and 31 software copyright certificates.
Offices	Nine regional offices have been established nationwide to provide customers with close and considerate services.
Registered Capital	The company has a registered capital of 20.58 million; it is a key high-tech enterprise supported by Xiamen City.
Historical Accumulation	18 years of industry R&D accumulation and industry application test.