CM520-56

Product Introduction

◆ CM520-56 is an industrial-grade dual-port gateway designed with a metal shell. It adopts an open software architecture design, with two Ethernet RJ45 interfaces, supports 2.4G WiFi, and uses 4G/5G WAN network for Internet communication. Software functions support VPN networking, IPTABLE firewall control, routing table, DHCP server and DHCP client, port mapping SNAT/DNAT, DMZ host, network diagnosis, DTU transparent transmission, user management, support APN/VPDN network, support automatic dialing after power-on , Automatically maintain the communication link, ensure that the link is always online and other functions.

◆ The whole device is FCC, CE, RoHS, E-mark approved and has passed the electric shock test of 3000V, all the wireless modules have passed the GCF (Global), FCC, CE and other oversea certification. After strict design, testing and more than 15yrs of practical application, the product performance is stable and reliable.
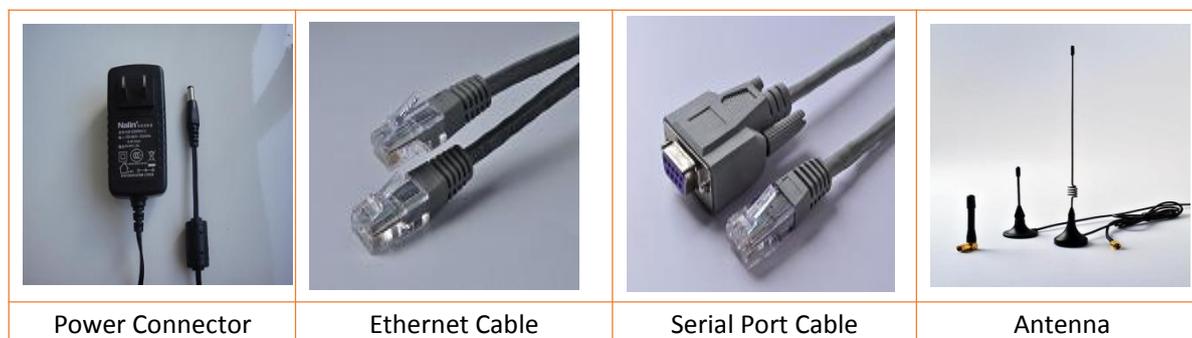
Model No.

Model No.	Interface Type	Network	RE232	RS485	Wi-Fi	Data Cache
CM520-56F	Terminal Interface,RJ45	4G	Support	Support	Support	FLASH 16MB SDRAM 128MB
CM520-56FS	Terminal Interface,RJ45	5G	Support	Support	Support	FLASH 16MB SDRAM 128MB

Technical Parameters

Device Interface Diagram

CM520-56 Accessories

| Power Connector | Ethernet Cable | Serial Port Cable | Antenna |

Model NO.	CM520-56
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)
	50 Mbps UL within 20 MHz bandwidth
Transmit Power	<24dBm
Receiver Sensitivity	<-109dBm

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

Advanced Features		
Working Mode	PPPoE / DHCP Client/ Static IP address/ SIM(support APN/VPDN)/ Main and auxiliary mode/Wi-Fi Relay	
Wi-Fi	Mode	802.11 a/b/g/n
	Encryption	WEP / WPA-PSK(TKIP/AES) / WPA2-PSK(TKIP/AES)
DDNS	Dyndns / 88ip / Oray	
Filter	IP Filter / MAC Address Filter	
DTU	Can be used as data transmitter unit, support for RS232, RS485	
Firmware Upgrade	Local / Remote	
VPN	PPTP, L2TP, IPSec, L2tp Over IPSec	
Protocol	TCP/IP UDP ICMP HTTP SMTP TELNET FTP	
NAT	√	
DMZ	√	
UPNP	√	
Routing Table	√	
QoS	√	
Flow Control	√	
Remote Config	√	
Restart Timer	√	
Firewall	√	
Web Config	√	
System Log	√	
Console	√	

Hardware System	
CPU	Industrial high performance embedded processing CPU, main frequency is 533MHz
MMU	CPU with MMU memory management unit, can prevent memory overflow
FLASH	16MB (expandable to 32MB)
SDRAM	128MB

Operation System	
OS	Linux2.6

Interface Parameters	
LAN	1 10/100 Base-T. Ethernet IEEE 802-3, 802-2. Built-in 1.5kV electromagnetic isolation protection.
WAN / LAN	Can be used as WAN port or LAN port.

Serial Port	1 RS232(Console Port)	
	Data Bit	7/8
	Stop Bit	1/2
	Parity Bit	NONE / ODD / EVEN / SPACE / MARK
	Serial Speed	110bps ~ 230400bps
	Flow Control	None flow control, RTS/CTS or XON/XOFF
Antenna	Standard SMA female interface, 50 Ohm	
UIM	1.8V/3V/5V standard putter user card interface, built-in 15KV ESD protection.	
Power	Standard round power socket	
Reset Button	Reset button to restore factory settings	

Power Supply	
Supply Voltage	DC5V to 35V. Over-voltage protection. Power reverse protection
Standard Power Supply	DC9V/1500mA
Communication Current	Average Communication Current: 390mA@+9VDC
	Communicating Instantaneous Peak Current: 1.0A@+9VDC
Standby Current	<56mA@+9VDC

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 IP30; particularly suit for harsh industrial control environments.
Product Dimension	93*92.5*26.5mm(Antenna and fixer are not included)
Package Size	350*215*88mm
Weight	0.7kg

Wi-Fi Parameters (For CM520-89)	
Module	Adopt embedded WIFI module in chip, high integration, good stability
Standard	802.11 a/b/g/n. Support 6/9/12/18/24/36/48/54Mbps. Up to 300Mbps
Encryption	Support for WAP encryption with built-in WAP and WAP 2.0, with 802.11I 4.0TKIP, AES and CCMP hardware safety engine
AP	√
Transmission Distance	outdoor coverage can reach 150 meters(with an open environment)

Other Parameters	
Operating Temperature	-25ºC ~ +65ºC
Extended Operating Temperature	-35ºC ~ +75ºC
Storage Temperature	-40ºC ~ +85ºC
Relative Humidity	95%(No condensation)

Indicator Light		
Power	On	Normal power supply
	Off	No power supply
WiFi	On	WiFi is enabled
	Off	WiFi is disabled
Online	On	The device is logged into the network
	Off	The device is not logged into the network

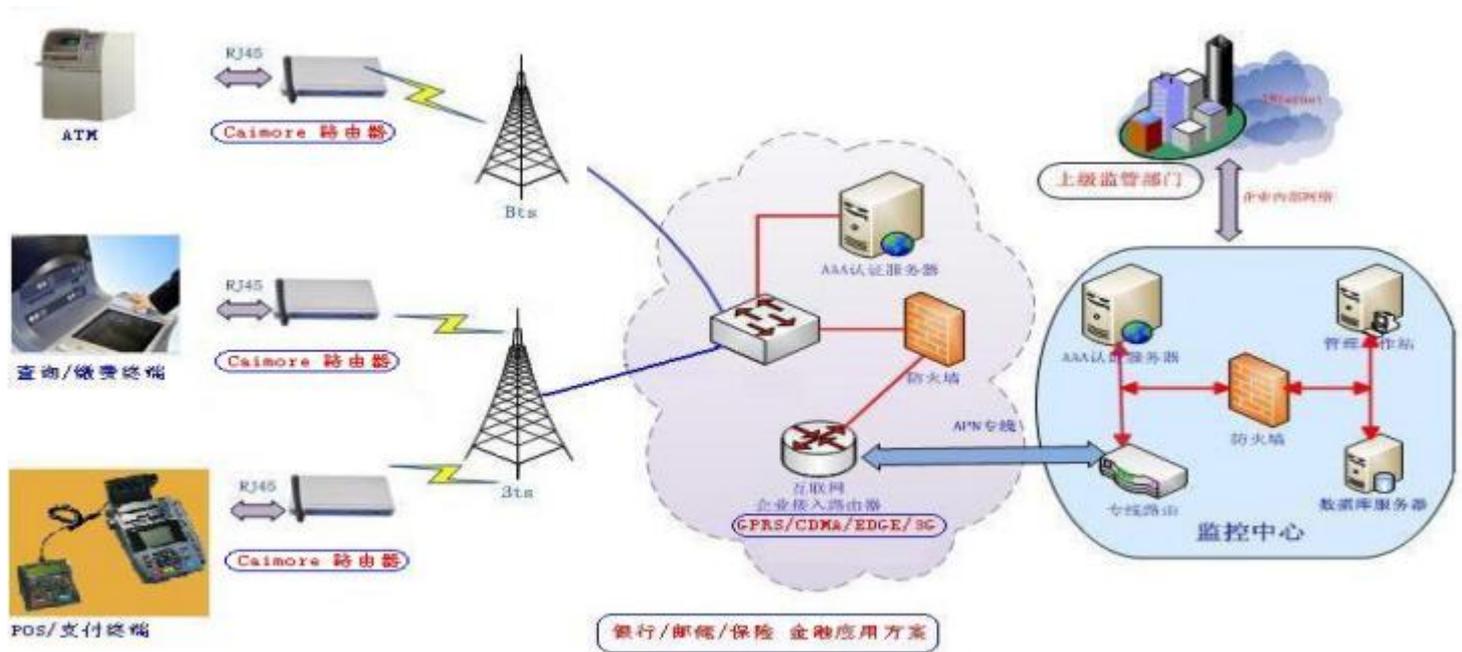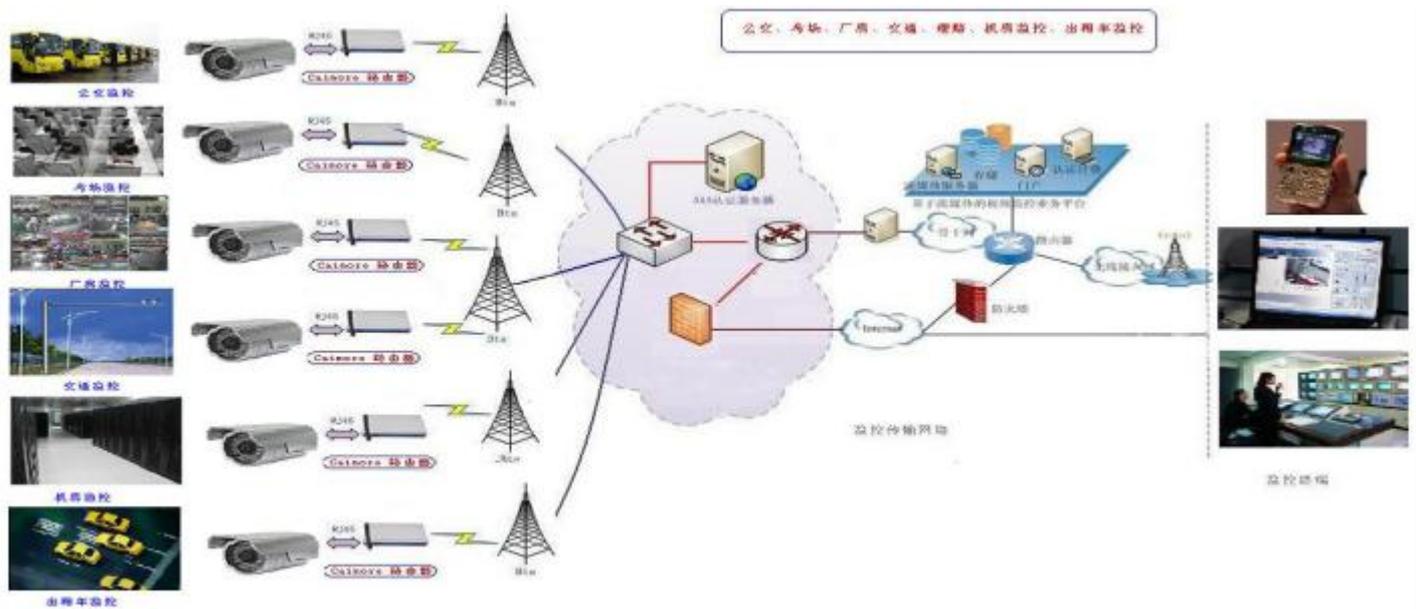## Installation Dimension
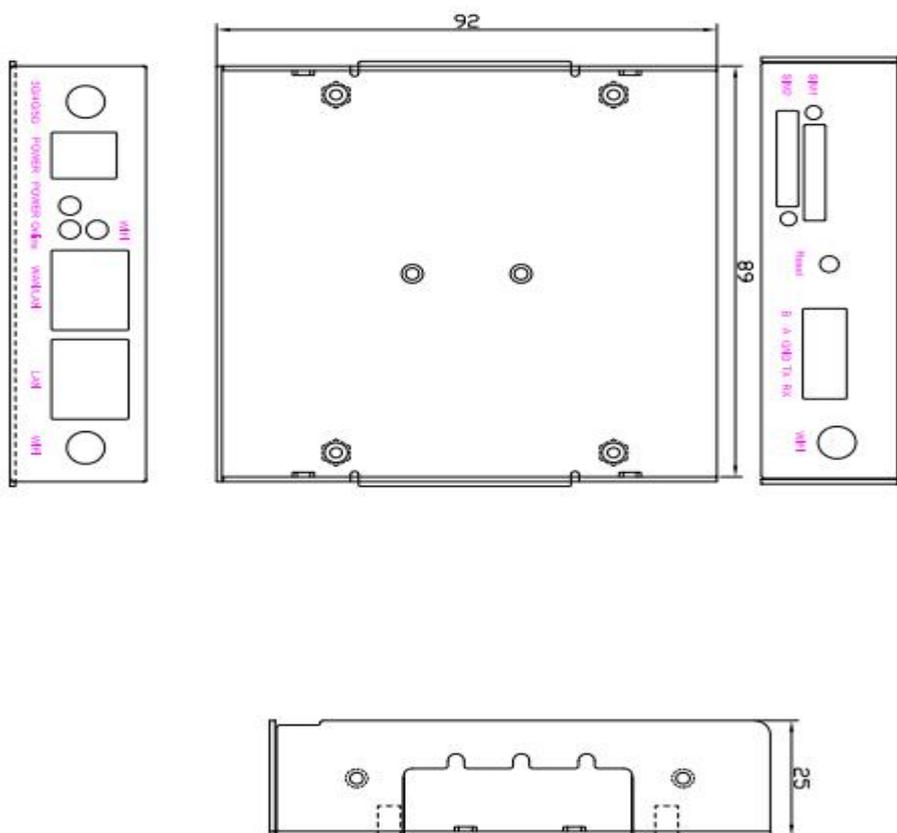
Product Application

1. Internet applications for businesses and homes

2.Application in financial transaction or traffic control industry

3.Video surveillance or video transmission

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
- ✧ Water monitoring

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.