

Product Introduction

- ◆ CM520-87 is an industrial-grade wireless gateway with 1 WAN port and 4 LAN ports, and supports both WiFi LAN (802.11a/b/g/n/ac) communication and 5G/4G wireless communication functions. The device supports multiple VPNS and has the security and authentication functions of WiFi LAN transmission. It can realize the seamless connection between wireless LAN and wireless WAN and provide users with high-speed, safe and reliable mobile network services.
- ◆ The product has a patented technology to maintain the stability of the system to ensure that the device is always online; the whole device adopts a metal shell, anti-interference and radiation protection, and industrial-grade design on the hardware.
- ◆ 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.

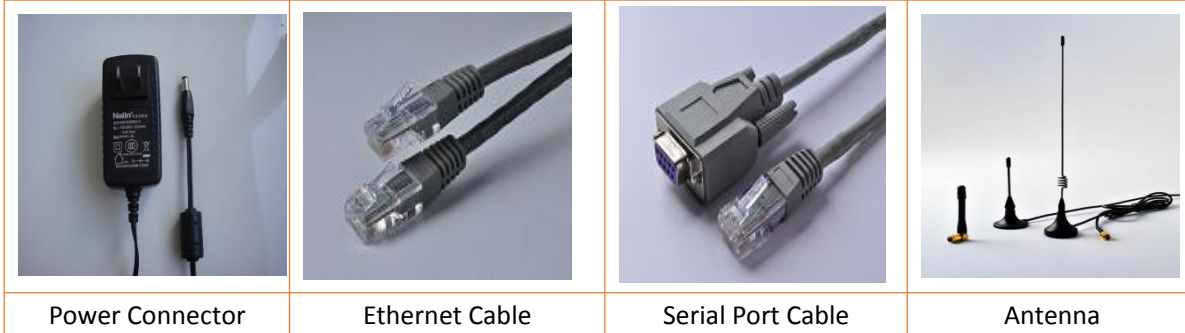
Model No.	Interface Type	Network	RS232	RS485	Data Cache
CM520-87F	RJ45	4G	Support	Optional	Support
CM520-87FS	RJ45	5G	Support	Optional	Support
CM520-87N	RJ45	N/A	Support	Optional	Support

Technical Parameters

Device Interface Diagram



CM520-87 Accessories

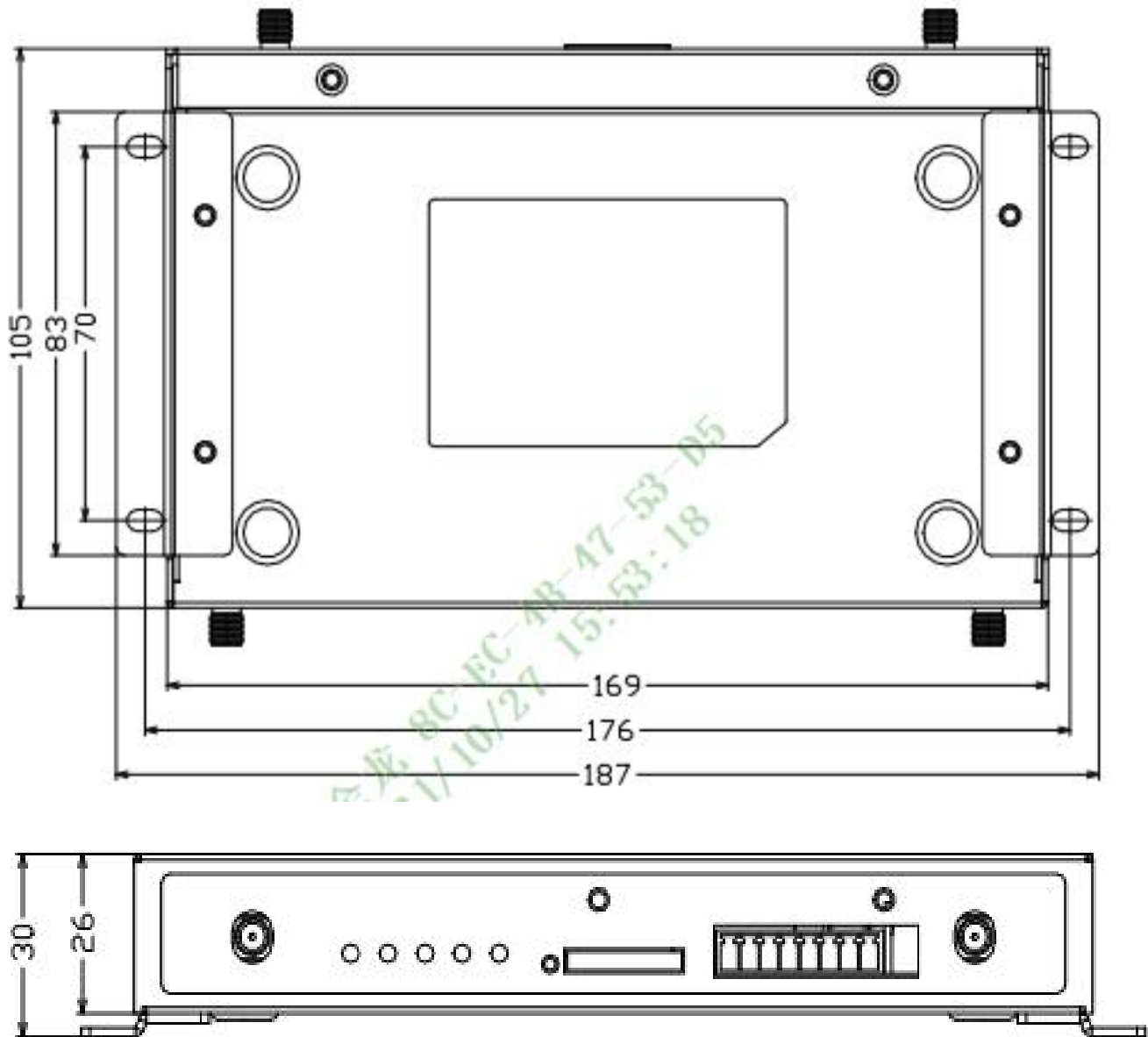


Model NO.	CM520-87
Cellular Parameters	
Network	LTE-FDD/HSPA+/UMTS/HSDPA/HSUPA/WCDMA/EDGE/GSM
Standards and Frequency Bands	EGSM 900 Power Class 4 2 W, 33 dBm
	GSM 1800 / 1900 Power Class 1 1 W, 30 dBm
	EDGE Power Class for 900MHz Class E21 27 dBm, 0.5 W
	EDGE Power Class for 1800 / 1900MHz Class E21 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 42Mbps, UL: 5.76Mbps
Transmit Power	<23dBm
Receiver Sensitivity	<-97dBm
Advanced Features	
Working Mode	PPPoE / SIM(support APN/VPDN) / SWITCH / DHCP Client / Wi-Fi Client
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 / Application Filter(media/music/URL)
DTU	Can be used as data transmitter unit.
Firmware Upgrade	Local / Remote
VPN	GRE / PPTP / IPSEC / L2TP / N2N / OPENVPN
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	√
RS232	√
RS485	Optional
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	4 10/100 Base-T. Ethernet IEEE 802-3, 802-2. Built-in 1.5kV electromagnetic isolation protection.
WAN	1 WAN. Supports PPPoE.
	1 RS232 & 1 RS485(can support RS422/TTL)

Serial 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 32V. 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	168*104*26mm(Antenna and fixer are not included)	
Package Size	350*215*88mm	
Weight	0.7kg	
Wi-Fi Parameters		
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	-25°C ~ +65°C	
Extended Operating Temperature	-35°C ~ +75°C	
Storage Temperature	-40°C ~ +85°C	
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
3G/4G	On	The device is accessed over 3G/4G networks
	Off	The device does not have 3G/4G networks
Online	On	The device is logged into the network
	Off	The device is not logged into the network

Installation Dimension

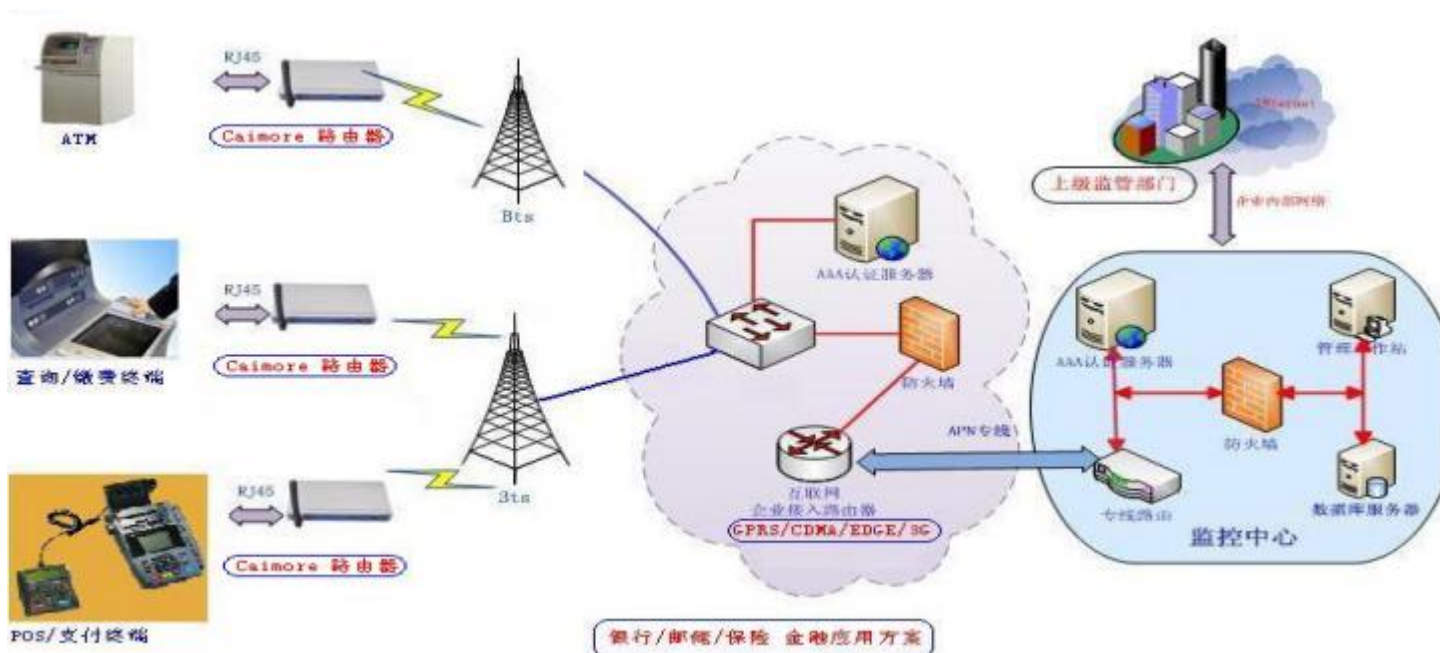


Product Application

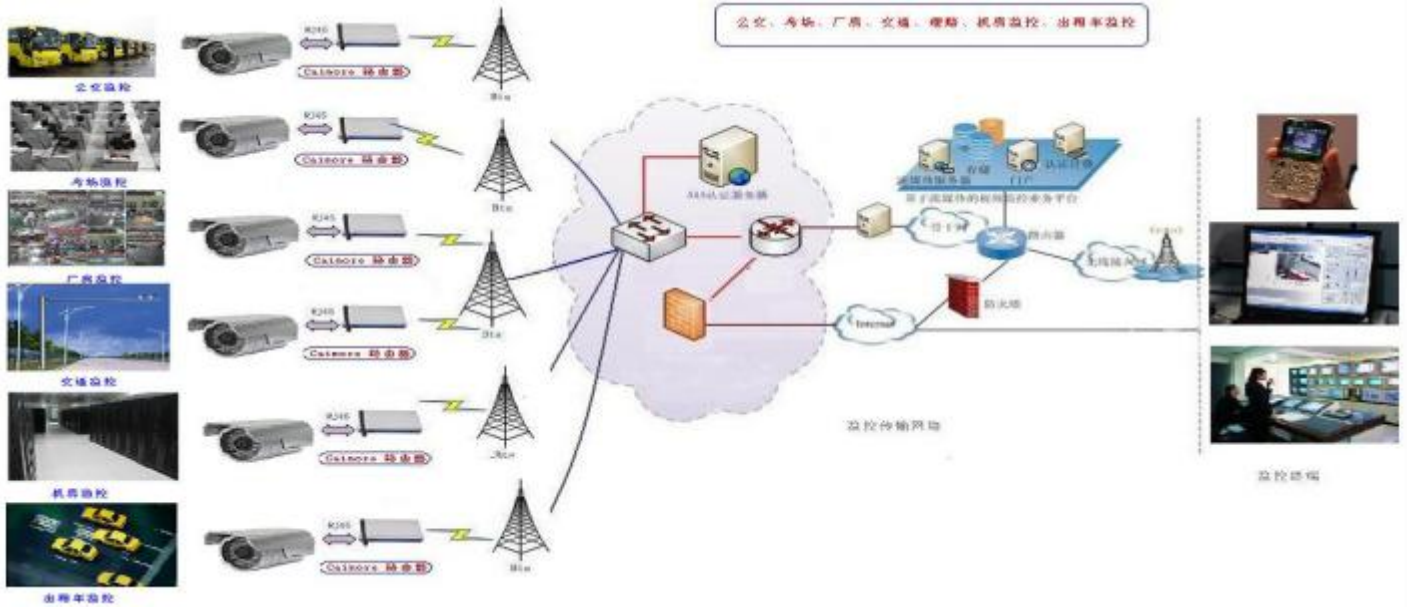
1. Internet applications for businesses and homes



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
Corporate Honor	<p>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".</p> <p>2012, the company became a member of "China Quality Travel".</p> <p>2013, the company became a member of the "Technical Innovation Strategic Alliance of Intelligent Power Transmission and Distribution Equipment Industry".</p> <p>2014, it was rated as an innovative pilot enterprise .</p> <p>2014, the company's Zhanjiang Wi-Fi coverage project was awarded the "Sample Engineering Award" by the 13th China Automation Annual Conference.</p> <p>2015, its video products were rated as "Top Ten Video Transmission Enterprises" by China's industrial control industry.</p> <p>2015, the noise monitoring project was awarded the "Sample Project Award" by the 14th China Automation Annual Conference.</p> <p>2015, its video products were rated as "Top Ten Video Transmission Enterprises" by Huaqiang Security Network.</p> <p>2016, the video products was rated by Huaqiang Security Network as "2015-2016 High-quality Supplier in China's Security Industry".</p> <p>2016, it was rated as the "best supplier of charging equipment parts" by charging pile communication equipment.</p> <p>2016, won the " Product Gold Award of 2016 7th Guangzhou International New Energy Automobile Industry Exhibition ".</p> <p>2016, The 3rd China Good Wi-Fi Organizing Committee awarded Caimore "2016 Best Wi-Fi Industry Application Solution Provider".</p> <p>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"</p> <p>2018, it was rated as a key listed reserve enterprise in Xiamen City.</p> <p>2019, it was rated as a key listed reserve enterprise in Xiamen City.</p> <p>2019, it was rated as a key listed reserve enterprise in Fujian Province.</p> <p>2019, Shortlisted for China Telecom Corporation Limited, DICT solution partner of Shanghai branch</p> <p>2020, Selected as a key listed reserve company in Xiamen</p>
High-tech Enterprise	2009, it was recognized as a high-tech enterprise by the country
Double-soft	2010, it was recognized as a double-soft enterprise by the country

Enterprise	
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.