

## Product Introduction

- ◆ CM520-8A/8V is an industrial-grade **vehicle-mounted** 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	GPS/BEIDOU	Wi-Fi	Data Cache
CM520-8AF	RJ45	4G	Support	Support	Support
CM520-8AFS	RJ45	5G	Support	Support	Support
CM520-8VF	RJ45	4G	N/A	Support	Support
CM520-8VFS	RJ45	5G	N/A	Support	Support

# Technical Parameters

## Device Interface Diagram



## CM520-8A/8V Accessories

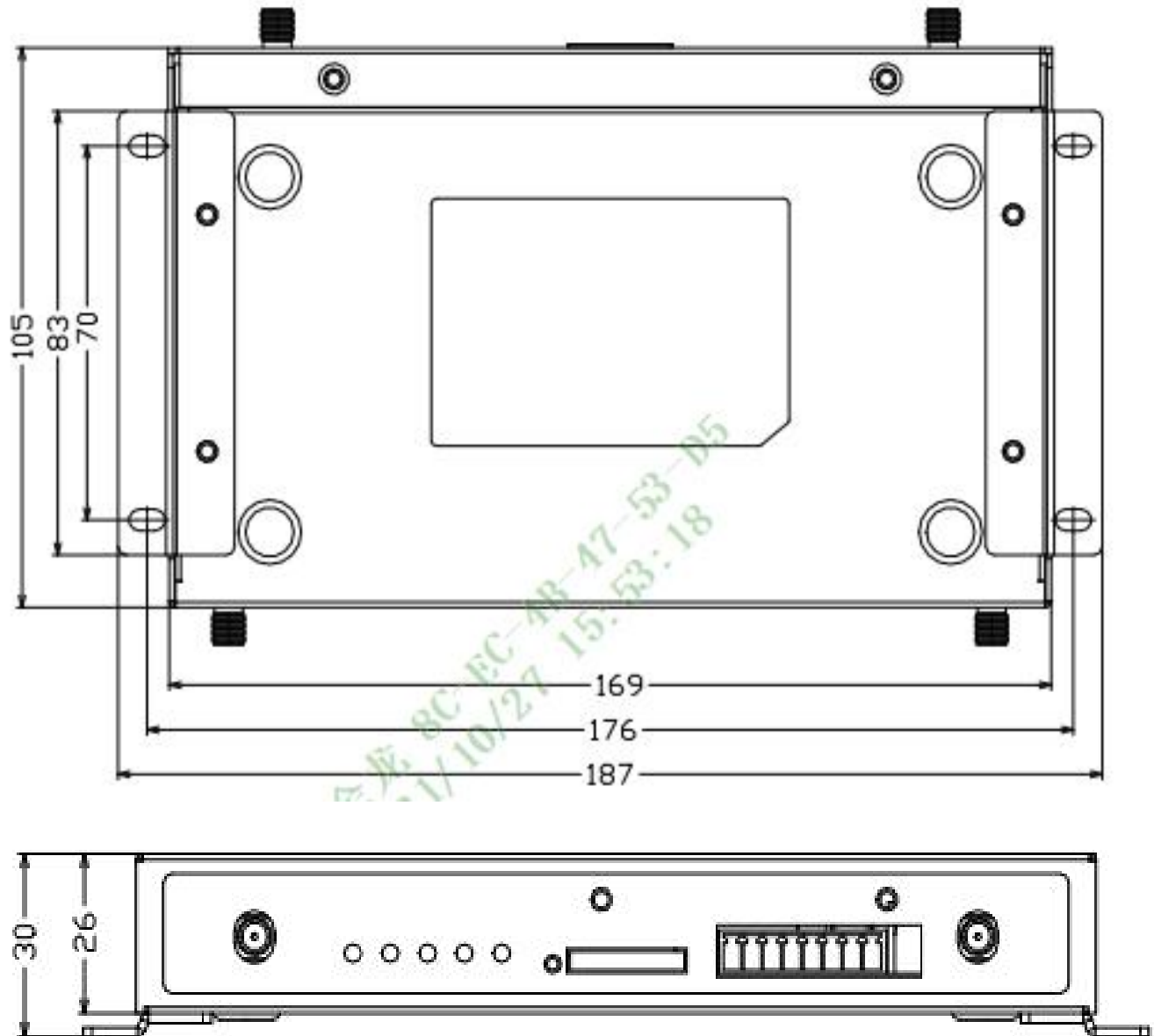
			
Power Connector	Ethernet Cable	Serial Port Cable	Antenna

Model NO.	CM520-8A/8V
<b>Cellular Parameters</b>	
<b>Network</b>	LTE-FDD/HSPA+/UMTS/HSDPA/HSUPA/WCDMA/EDGE/GSM
<b>Standards and Frequency Bands</b>	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.)
<b>Coding Scheme</b>	HSPA+/ DC-HSPA+ / GPRS / EDGE
<b>Communication Bandwidth</b>	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
<b>Transmit Power</b>	<24dBm
<b>Receiver Sensitivity</b>	<-109dBm
<b>Cellular Parameters</b>	
<b>Network</b>	5G NR/LTE/HSPA+

<b>Wireless Module</b>	Adopt industrial-grade wireless module	
<b>Standards and Frequency Bands</b>	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	
<b>Theoretical bandwidth</b>	5G NR: DL 3.4Gbps, UL: 350Mbps LTE Cat20: DL 2.0Gbps, UL: 150Mbps HSPA+: DL 42Mbps, UL: 5.76Mbps	
<b>Transmit Power</b>	<23dBm	
<b>Receiver Sensitivity</b>	<-97dBm	
<b>Advanced Features</b>		
<b>Working Mode</b>	PPPoE / SIM(support APN/VPDN) / SWITCH / DHCP Client / Wi-Fi Client	
<b>Wi-Fi</b>	Mode	802.11 a/b/g/n
	Encryption	WEP / WPA-PSK(TKIP/AES) / WPA2-PSK(TKIP/AES)
<b>DDNS</b>	Dyndns / 88ip / Oray	
<b>Filter</b>	IP Filter / MAC Address Filter / Application Filter(media/music/URL)	
<b>DTU</b>	Can be used as data transmitter unit.	
<b>Firmware Upgrade</b>	Local / Remote	
<b>VPN</b>	GRE / PPTP / IPSEC / L2TP / N2N / OPENVPN	
<b>Protocol</b>	TCP/IP UDP ICMP HTTP SMTP TELNET FTP	
<b>NAT</b>	√	
<b>DMZ</b>	√	
<b>UPNP</b>	√	
<b>Routing Table</b>	√	
<b>QoS</b>	√	
<b>Flow Control</b>	√	
<b>Remote Config</b>	√	
<b>Restart Timer</b>	√	
<b>Firewall</b>	√	
<b>Web Config</b>	√	
<b>System Log</b>	√	
<b>Console</b>	√ (Can be used as RS232)	
<b>Vehicle Mounted</b>	√	
<b>GPS</b>	<b>CM520-8A Supports GPS</b>	
<b>AD Playing</b>	√	
<b>Hardware System</b>		
<b>CPU</b>	Industrial high performance embedded processing CPU, main frequency is 533MHz	
<b>MMU</b>	CPU with MMU memory management unit, can prevent memory overflow	
<b>FLASH</b>	16MB (expandable to 32MB)	
<b>SDRAM</b>	128MB	
<b>Operation System</b>		
<b>OS</b>	Linux2.6	
<b>Interface Parameters</b>		
<b>LAN</b>	4 10/100 Base-T. Ethernet IEEE 802-3, 802-2. Built-in 1.5kV electromagnetic isolation protection.	
<b>WAN</b>	1 WAN. Supports PPPoE.	
<b>Serial Port</b>	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
<b>Antenna</b>	Standard SMA female interface, 50 Ohm	
<b>UIM</b>	1.8V/3V/5V standard putter user card interface, built-in 15KV ESD protection.	
<b>USB</b>	1 USB interface, USB2.0, HOST interface, 12 Mbps	
<b>TF Card</b>	1 ~ 32GB. 2 slots.	
<b>Power</b>	Standard 3-core locomotive power outlet	
<b>Reset Button</b>	Reset button to restore factory settings	
<b>Power Supply</b>		
<b>Supply Voltage</b>	DC5V to 32V. Over-voltage protection. Power reverse protection	
<b>Standard Power Supply</b>	DC9V/1500mA	
<b>Communication Current</b>	Average Communication Current: 390mA@+9VDC	
	Communicating Instantaneous Peak Current: 1.0A@+9VDC	
<b>Standby Current</b>	<56mA@+9VDC	
<b>Physical Features</b>		
<b>Shell</b>	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.	
<b>Product Dimension</b>	168*104*26mm(Antenna and fixer are not included)	
<b>Package Size</b>	350*215*88mm	
<b>Weight</b>	0.7kg	
<b>Wi-Fi Parameters</b>		
<b>Module</b>	Adopt embedded WIFI module in chip, high integration, good stability	
<b>Standard</b>	802.11 a/b/g/n. Support 6/9/12/18/24/36/48/54Mbps. Up to 300Mbps	
<b>Encryption</b>	Support for WAP encryption with built-in WAP and WAP 2.0, with 802.11i 4.0TKIP, AES and CCMP hardware safety engine	
<b>AP</b>	√	
<b>Transmission Distance</b>	outdoor coverage can reach 150 meters(with an open environment)	
<b>Other Parameters</b>		
<b>Operating Temperature</b>	-25°C ~ +65°C	
<b>Extended Operating Temperature</b>	-35°C ~ +75°C	
<b>Storage Temperature</b>	-40°C ~ +85°C	
<b>Relative Humidity</b>	95%(No condensation)	
<b>Indicator Light</b>		
<b>Power</b>	On	Normal power supply
	Off	No power supply
<b>WiFi</b>	On	WiFi is enabled
	Off	WiFi is disabled
<b>3G/4G</b>	On	The device is accessed over 3G/4G networks
	Off	The device does not have 3G/4G networks
<b>Online</b>	On	The device is logged into the network
	Off	The device is not logged into the network

## Installation Dimension



# Product Application

## 1. WIFI application on buses



## Typical application

### WIFI coverage application:

- ◆ Bus WIFI coverage, wireless Internet advertising push and equipment management
- ◆ Taxi WIFI coverage, wireless Internet advertising push and equipment management
- ◆ Long-distance bus WIFI coverage, wireless Internet advertising push and equipment management
- ◆ Hotel WIFI coverage, wireless Internet advertising push and equipment management
- ◆ WIFI coverage in public places, wireless Internet advertising push and equipment management
- ◆ WIFI coverage in tourist attractions, wireless Internet advertising push and equipment management

## Corporate Qualification

Item	Content
<b>Corporate Honor</b>	<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>
<b>High-tech Enterprise</b>	2009, it was recognized as a high-tech enterprise by the country
<b>Double-soft</b>	2010, it was recognized as a double-soft enterprise by the country

<b>Enterprise</b>	
<b>Occupational Health and Safety Management System Certification</b>	<p>ISO9001:2015 quality management system conforms to the standard</p> <p>ISO14001:2015 environmental management system conforms to the standard</p> <p>ISO45001:2018 occupational health and safety management system conforms to the standard</p>
<b>Copyright</b>	The company has 7 patented technology certificates to maintain equipment stability and 31 software copyright certificates.
<b>Offices</b>	Nine regional offices have been established nationwide to provide customers with close and considerate services.
<b>Registered Capital</b>	The company has a registered capital of 20.58 million; it is a key high-tech enterprise supported by Xiamen City.
<b>Historical Accumulation</b>	18 years of industry R&D accumulation and industry application test.