INDUSTRIAL CONNECTIVITY / ENGLISH TECHNICAL DOCUMENT

CM510-62X Series

Industrial cellular data transfer unit



Original source photograph

Source revision not stated | English review edition | 20 October 2026

REVIEW EDITION - translated from the supplied Chinese document. Source inconsistencies and optional features are retained. See the final review checklist.

Inside this document

Product scope / Technical data / Interfaces and installation / Functions and configuration / Source review notes

Product overview and selection

Source pp. 1-2

CM510-62X is an industrial low-power DTU providing transparent long-distance data transfer from RS232/RS485 field equipment to a remote center. The source calls the processor ARM7 and describes a real-time OS/TCP/IP stack.

Source reports Mo'er testing at 80 °C / 85% humidity, -40 °C, salt mist, free fall and vibration; high-/low-temperature data testing lasts four hours each. These are test claims rather than operating ratings.

Models

Model	Network	RS232	RS485	Buffer
CM510-62G	GPRS	Yes	Yes	8K
CM510-62C	CDMA	Yes	Yes	8K

Low-power, industrial and functional design

Source pp. 2-3

- Industrial embedded processor and wireless module; real-time operating system and TCP/IP stack. PCB layout follows the source-listed 20H/3W principles with Shengyi board materials and selected industrial components.
- Software protection, CPU watchdog and Virtual Man Watch (VWM) monitor operation and recover from abnormal network/system conditions. Reconnection and always-online statements describe source intent, not guaranteed uptime.
- Push-type 1.8 V / 3 V / 5 V UIM/SIM interface and serial interfaces have source-listed 15 kV ESD protection. Confirm actual model interfaces before connection.
- Automatic DNS acquisition; TCP/IP communication; industrial EMC/EMI design. The source cites a 3000 V electrical test and FCC/CE/CCC/RoHS statements for wireless modules; certificate identities and product scope require verification.
- Single-center transparent TCP transfer; APN; fixed IP and dynamic domain; automatic connection maintenance/redial.
- Sleep when no data is exchanged; wake on serial data or data sent by the center. Source claims no data loss; confirm buffering and timing for the application.
- Source lists KingView, RealInfo/Zijin Bridge and ForceControl integration, packet-status reporting, AT commands, serial upgrades, SMS IP/port and remote parameter configuration.
- GUI quick configuration, C#/VC center software and serial/network diagnostic tools; dedicated debug port for on-site testing and configuration/upgrade.
- Source metal enclosure: IP41, EMI shielding, enclosure/system isolation and lightning-protection design.

Terminal definitions and interfaces

Source pp. 4-5

14-pin terminal

Pin	Signal	Function
1 / 2	POWER / GND	7-32 V input / power ground.
3 / 4	485A / 485B	RS485 A/B.
5 / 6	RXD / TXD	RS232 receive input / transmit output; communication, configuration and download.
7	GND	Shared communication/debug ground.
8 / 9	DRX / DTX	RS232 debug receive input / transmit output; 115200,8,1,N. Datasheet also describes configuration/download via this port.
10	SW	Reserved enable input: 0 V OFF, floating/high ON. Confirm electrical limits.
11-14	IO1-IO4	Reserved in the datasheet; the manual instead lists I/O status/control. NEEDS_VERIFICATION.

Serial / peripherals

Parameter	Source specification
Serial	8 data bits; 1/1.5/2 stop bits; none/odd/even parity; 300-115200 bit/s; no flow control. At 115200 bit/s in sleep mode, downstream reception may be abnormal; use another rate or disable sleep.
Indicators	POWER, ACT and Online.
Antenna	SMA female, 50 ohm; optional 3/5/10/15 m extension cables.
SIM	1.8/3/5 V push-type card interface; source-listed 15 kV ESD protection.
Power connector	Standard 3-pin locomotive-style power socket, as described. Confirm actual connector with hardware.

Radio specifications

Source p. 5

Source radio parameters

Parameter	Source specification
Bands	GSM/GPRS 850/900/1800/1900 MHz; CDMA 800 MHz.
GPRS	Multislot class 12/10; mobile station class B; GSM phase 2/2+; CS1-CS4.
Theoretical data rate	Up to 85.6 kbit/s, source uplink/downlink notation.
GSM power	Class 4, 2 W at 850/900 MHz; class 1, 1 W at 1800/1900 MHz.
Receive sensitivity	GSM850/EGSM900 and DCS1800/PCS1900: typical <-109 dBm; maximum <-107 dBm, as listed.

Power, mechanics and environment

Source p. 6

Power

Parameter	Source specification
Input	7-32 V DC with reverse-polarity, overvoltage and overcurrent protection.
Standard adapter	9 V DC / 1330 mA
Communication	62G: 52 mA at 9 V; 62C: 85 mA at 9 V.
Registration peak	120 mA at 9 V.
Standby	Both models <30 mA at 9 V.
Sleep	62G <10 mA at 9 V; 62C <14 mA at 9 V.

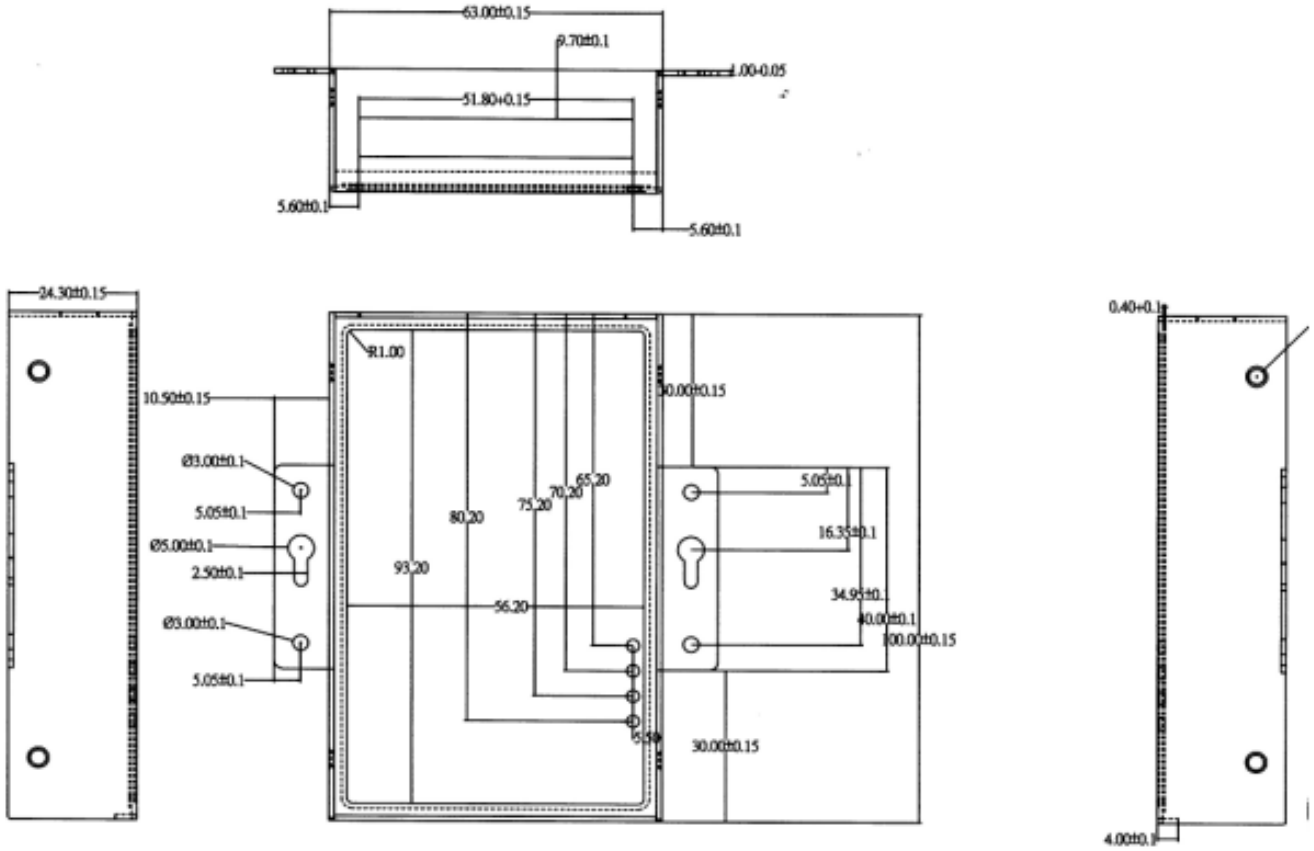
Mechanical / environment

Parameter	Source specification
OS	Real-time OS.

Parameter	Source specification
Body	92 x 62 x 22 mm, excluding antenna and fixtures.
Package	298 x 226 x 60 mm
Weight	0.41 kg
Operating	-30 to +75 °C
Storage	-45 to +90 °C
Humidity	95% RH, non-condensing.

Installation drawing

Source p. 7



Original source dimensional drawing

Applications and system architecture

Source pp. 7-9

The source illustrates field equipment > DTU > cellular base station / operator network > data center. Sensors, controllers, supervisory software, server infrastructure and third-party platforms are integration components.

Application examples

Parameter	Source specification
Power and utilities	Power monitoring; street-light monitoring; meter monitoring; equipment-room monitoring; distribution-network automation and remote control; remote meter reading.
Transportation	Traffic guidance; vehicle guidance; highway monitoring; traffic-light control and image transmission.

Parameter	Source specification
Water	Water-resource monitoring; real-time water-supply network monitoring.
Environment, meteorology and oilfields	Key pollution-source monitoring; environmental monitoring; weather monitoring; real-time noise monitoring; oilfield monitoring; heat-network monitoring; coal and gas monitoring; earthquake monitoring.
Serial equipment	Wireless data transmission for domestic and international PLCs with serial or RS485 interfaces; DTU data transmission.

Company profile and historical recognition

Source p. 10

The following company information is translated from the supplied document and describes the source-era profile. Awards, counts and certifications have not been updated to the present day. English award names are descriptive translations.

Company honors

Year	Recognition stated in source
2011	Named a "Best Supplier for Customer Satisfaction in China's Industrial Control Industry"; the company's GPRS DTU received an "Innovative Product Award".
2012	Became a member of China Quality Long March.
2013	Became a member of the Strategic Alliance for Technological Innovation in the Intelligent Power Transmission and Distribution Equipment Industry.
2014	Recognized as an innovative pilot enterprise. The Zhanjiang Wi-Fi coverage project received a "Model Engineering Project Award" at the 13th China Automation Annual Conference.
2015	Video products were named among the "Top Ten Video Transmission Enterprises" by China Industrial Control and by Huaqiang Security Network. The noise-monitoring project received a "Model Engineering Project Award" at the 14th China Automation Annual Conference.
2016	The video product line was named a "2015-2016 Quality Supplier in China's Security Industry" by Huaqiang Security Network. Charging-pile communication equipment received a "Best Charging Equipment Component Supplier" award.
2016	Received a product gold award at the 7th Guangzhou International New Energy Automobile Industry Exhibition. The organizing committee of the 3rd China Good Wi-Fi event named CAIMORE a "2016 Best Wi-Fi Industry Application Solution Provider".

Year	Recognition stated in source
2018	Industrial routers and DTUs were named among China's top ten brands in their respective categories. Recognized as a key reserve enterprise for public listing in Xiamen.
2019	Recognized as a key reserve enterprise for public listing in Xiamen and Fujian Province. Selected as a DICT solution partner of China Telecom Corporation Limited, Shanghai Branch.
2020	Recognized as a key reserve enterprise for public listing in Xiamen.

Company qualifications

Parameter	Source specification
High-tech enterprise	Recognized nationally as a high-tech enterprise in 2009.
Dual-software enterprise	Recognized nationally as a dual-software enterprise in 2010.
Management systems listed	ISO 9001:2015 quality management; ISO 14001:2015 environmental management; ISO 45001:2018 occupational health and safety management.
Intellectual property	7 patented technologies for device stability and 31 software copyright certificates.
Regional offices	9 regional offices across China, providing nearby customer service.
Registered capital	RMB 20.58 million. The source identifies CAIMORE as a high-tech enterprise supported by Xiamen.
Industry experience	18 years of industry R&D accumulation and application experience, as stated in the source.

Contact information

Parameter	Source specification
Company	Xiamen CAIMORE Communication Technology Co., Ltd.
Address as printed in source	Units 901 and 904, No. 63 Chengyi North Street, Software Park Phase III, Xiamen, China
Telephone / fax	+86-592-5902655 / +86-592-5975885
Website / email	https://www.caimore.com / caimore@caimore.com

Translation and source review notes

Editorial notes

English review translation of the supplied Chinese document. Repeated page furniture, repeated tables and repeated configuration actions are consolidated. Chinese software screenshots are original visual references with English explanations. No device, firmware or certificate testing has been performed. NEEDS_VERIFICATION marks unresolved source statements.

Review checklist

Topic	Review note
Model label	The first model-table row prints CM510-62X for GPRS while the prose/accessory heading and manual use CM510-62G. English uses 62G with this note.
Cross-document differences	Datasheet: 92 x 62 x 22 mm, storage -45 to +90 °C, adapter 1330 mA and reserved I/O. Manual: 93 x 62 x 23 mm, storage -40 to +90 °C, adapter 1.5 A and I/O control. Keep revisions distinct.
Sleep current	Generic 10 mA statement does not override model-specific <14 mA for 62C.
Claims and scope	Source certification, reliability, always-online and software compatibility claims are not independently verified. Confirm exact hardware, firmware and regional modem before public release.
Publication status	English review edition; not uploaded. Confirm technical discrepancies before approving a public edition.