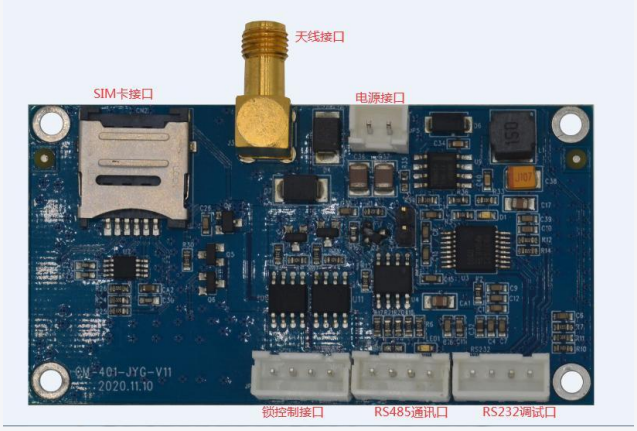
INDUSTRIAL CONNECTIVITY / ENGLISH TECHNICAL DOCUMENT

CM510-77T

Industrial cellular data transfer unit



Original source photograph

Source V1.0 | 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 p. 1

CM510-77T is an industrial wireless DTU for transparent TCP/UDP/MQTT data transfer over LTE FDD/TDD and GSM. It connects field PLCs and industrial equipment to a remote center through RS232/RS485 as described in the overview.

The source calls the CPU ARM7 and reports a 3000 V electrical test and Mo'er environmental tests at 80 °C / 85% humidity and -30 °C, with four hours of data transfer in each temperature condition. Test conditions do not replace operating ratings.

Model

Model	Network	RS232	RS485	Buffer
CM510-77T	4G/GSM	Yes	Yes	8k

Industrial design and functions

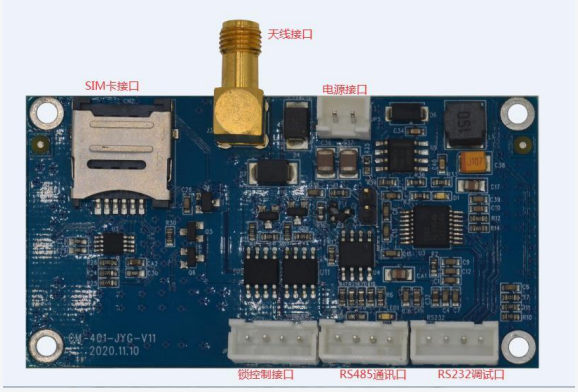
Source pp. 2-3

- 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.
- 7-32 V supply is stated in the industrial-design section; the later technical table states 5-35 V. Confirm the approved input range.
- Up to four TCP/UDP/MQTT centers; APN; fixed-IP/dynamic-domain access; online detection and automatic redial.
- RealInfo/Zijin Bridge, KingView and ForceControl integration; packet-status reporting; standard AT commands; serial upgrades; SMS IP/port and remote parameter configuration.
- MQTT, Modbus RTU/TCP conversion and JSON. Dedicated debug serial, GUI quick configuration, C#/VC center tools and serial/network diagnostics assist integration.

Interfaces and radio specifications

Source p. 4

Original photograph labels, translated: SIM card socket; antenna connector; power connector; lock-control interface; RS485 communication port; RS232 debug port. The source does not supply numerical pin assignments.



Original annotated module photograph; Chinese labels retained as source reference, with English legend above.

Serial / peripheral interfaces

Parameter	Source specification
Serial	8 data bits; 1/1.5/2 stop bits; none/odd/even parity; 300-115200 bit/s; no flow control. Detailed table lists one RS485 plus one RS232 debug port, unlike the general RS232/RS485 communication wording. Confirm actual port functions.
Enable	Customer control of power on/off, as stated; pin number not supplied.
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

Parameter	Source specification
Bands	LTE FDD B1/B3/B5/B8; LTE TDD B34/B38/B39/B40/B41; GSM 900/1800 MHz.
Transmit power	<24 dBm
Receive sensitivity	<-109 dBm

Power, mechanics and environment

Source p. 5

Source parameters

Parameter	Source specification
OS	Real-time OS.
Input	5-35 V DC in technical table; 7-32 V in feature section. NEEDS_VERIFICATION.
Adapter	9 V DC / 1330 mA
Current	Communication 60 mA at 12 V; standby 25 mA at 12 V.
Body	75 x 40 x 15 mm, excluding antenna and accessories.
Operating	-30 to +75 °C
Storage	-45 to +90 °C
Humidity	95% RH, non-condensing.

Company profile and historical recognition

Source p. 6

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.

Year	Recognition stated in source
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".
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
Power / interface differences	Input-voltage ranges conflict; RS232 communication/debug role differs among sections. Numerical pinout and enable voltage limits are not supplied.
Integration	Obtain connector and pin information before wiring; do not transplant 76F/62X pin assignments.
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.