ComIn D220

4G Cat1 DTU

Product Specifications

- Support 4G Cat1 and GPRS

- Industrial Grade Components, Can Use in Harsh Environment

- Support Multiple Transmission Protocol (Customizable)

- Support Remote Management Platform, Enable centralized management and large-scale deployment

- Support RS232 or RS485

Product Description

With the continuous development of network informatization, the application of cellular communication products in the field of data transmission is increasingly widespread and the GPRS network is withdrawn from the network. Shenzhen Movingcomm Technology developed the ComIn D220 M2M product. D220 is a Cat1 wireless data transmission terminal with an intelligent power supply design that passed the strict electromagnetic compatibility test and the experiment of withstanding more than the 7000V lightning strike. It is completed with an ultra-industrial design and high reliability, especially suitable for areas with harsh environments and large temperature differences.

ComIn D220 product adopts dual serial channel mode and supports both RS232 and RS485 standard interfaces. It supports TCP/IP protocol, and transmission protocols, and utilizes a cellular network to realize transparent transmission of data information. It is suitable for single-chip data acquisition and transmission systems such as PLC or RTU, and industrial computers that use serial communication. It can make the customer's original wired serial device immediately transform into a wireless network communication device without modification, reducing the system upgrade costs.

The ComIn D220 product is a new generation of 4G wireless DTU launched by Shenzhen Movingcomm Technology for the industrial field. It is an IoT wireless product integrating 4G network, private network, and other technologies. It provides one RS232 and one RS485 universal interface. Wireless wide area network provides uninterrupted various network access capabilities, as well as comprehensive security and wireless services and other characteristics that help to digitalize information of the machine equipment. The design of this series of products fully meets the needs of unattended on-site communication. It adopts software and hardware watchdog and multi-level link detection mechanism to ensure the stability and reliability of communication. It supports the cloud management platform, which is convenient for users to manage remotely. Advanced software functions and a fully industrialized hardware design platform enable enterprises to quickly build large-scale industrial equipment networks with minimal investment.

The ComIn D220 is especially suitable for large-scale equipment networking, such as power distribution automation, power meter reading, battery management, robots, field operation machinery, oil and gas exploration and extraction equipment, digital production equipment, and data network construction of other machinery. Excellent hardware performance, multiple network access, easy deployment, and perfect remote management functions are flourishing in the construction of equipment informatization.

Key Features

Uninterrupted Network Access

- Supports 4G LTE TDD and LTE FDD networks, and is backward compatible with 2G GSM/GPRS networks. In the case of unstable 4G network coverage, it can be smoothly backward compatible to ensure uninterrupted data.
- Support RS232 and RS485, plug and play.

industrial design

- EMC class
- Anti-static Protection
- Surge Protection
- Metal housing, IP41.
- Wide Temperature Range: 30°C to 75°C
- Wide Voltage Range: 5V-36V DC.

Secure Data Transmission

- Data transmission security
  - Support APN, and VPDN wireless private networks to provide a highly secure data transmission.

High-reliability design

- Link Detection Design
  - Link layer detection: auto connection when the link is disconnected and maintain link connection uptime.
  - PPP layer detection: maintains the link with the operator's network, prevents forced dormancy, and maintains the smoothness of the network.
- Equipment fault self-healing design
  - Built-in watchdog, auto-recovery from operation failure, to ensure the reliability of equipment.

Simple to Use, Easy to Operate and Maintain

- Support cloud platform, easy to use and quick to deploy.
- AT command set, simple operation, clear logic, clear at a glance.

Hardware Interface

- Provide a TTL, RS232 or RS485 shared UART interface, used as a transparent transmission DTU channel.
- Provide a reset pin for restarting, and control the DTU reset through the lower computer.

Hardware Specifications

Main Chipset	CPU	ARM Cortex-A5 Processor, Core-Clock Speed 500MHz
	ROM	8MB
	RAM	16MB
Interface	SIM	1 x 2FF SIM Card Slot (Drawer Type)
	Serial	1 x RS232 or RS485 (cannot be used at the same time)
	Power	5~36V DC
	Reset	Controlled by Terminal Block (Voltage Low level)
	Antenna	1 x SMA Connector
Power Supply	Power Supply Voltage	5~36V DC, Support Reserve Polarity Protection, Overload Protection
	Power Consumption	Typical 15mA@12V (Continuous Data Transmission)
		Peak 150mA@12V (Instantaneous)
		Standby 5mA@12V
Environment	Operation Temperature	-30°C to 75°C
	Storage Temperature	-40°C to 85°C
	Humidity	5% ~ 95% RH (Non condensing)
Transmitting Power	GSM850	+33dBm (Power Class 4)
	EGSM900	+33dBm (Power Class 4)
	DCS1800	+30dBm (Power Class 1)
	PCS1900	+30dBm (Power Class 1)
	LTE	+23dBm (Power Class 3)
Antenna	2G/4G	50 Ohms Characteristic Impedance
Mechanical	Dimension	80 x 60 x 21mm (L x W x H), (Excluding antenna and mounting sets)
	Installation	Hanging Ears or Din-Rail
	IP Rating	IP41
	Weight	132g
LED Indicator	SYS	System LED Indicator
	LINK	Link Connection Indicator
	DATA	Data Transmission Indicator

	SIGNAL	3-level Signal Strength Indicator
EMC	ESD Immunity	EN61000-4-2, Level 3
	Surge Immunity	EN61000-4-5, Level 3
	Ring Wave Immunity	EN61000-4-12, Level 3

Cellular Specs

4G CAT1			
Frequencies	CN Version	FDD-LTE	B1, B3, B5, B8
		TDD-LTE	B38, B39, B40, B41
		GSM/GPRS	850, 900, 1800, 1900MHz
	EA Version	FDD-LTE	B1, B3, B5, B7, B8, B20, B28
		TDD-LTE	B38, B39, B40, B41
		GSM/GPRS	850, 900, 1800, 1900MHz
Data Speed Rate	FDD-LTE		Non-CA Cat1, DL 10Mbps, UL 5Mbps
	FDD-TDD		Non-CA Cat1, DL 8Mbps, UL2Mbps
	GSM/GPRS		DL 85.6Kbps, UL 85.6Kbps

Connector PIN Definition

Phoenix Terminal Block Pin Definition (Pitch 2.54mm)			
PIN	Definition	Description	Remark
1	VCC	Power Positive	DC 5~36V
2	GND	Power Ground	
3	GND	Signal Ground	
4	232-TX	RS232 Send	
5	232-RX	RS232 Receive	
6	485-A	RS485	
7	485-B	RS485	
8	RST	Reset	Low Electrical Level to Reset
9	GPIO	Reserved	
10	GPIO	Reserved	

Product Views

Product Dimension
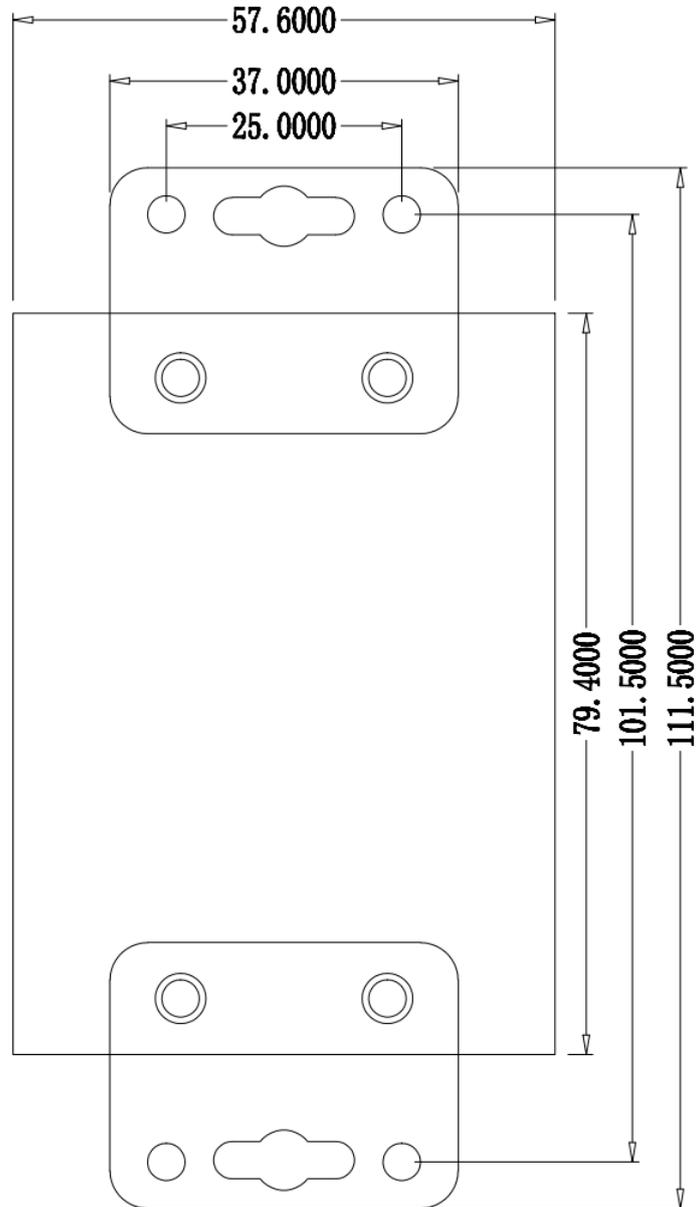
Order Information

Model	Description
ComIn D220-CN	4G Cat1 DTU, China Bands
ComIn D220-EA	4G Cat1 DTU, European Bands

Standard Product Packaging
- 1 x ComIn D220 Device

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