Product Name：LTE DTU Data Transfer Module

Model: D9201

Datasheet

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Overview

      D9201 series DTU is an industrial-grade wireless data transmission module, uses wireless cellular network as the bearer network to provide industrial users with wireless data transmission channels over TCP/IP, functionally realizing wireless data communication between field serial devices and the central control system, enabling remote data acquisition and control of field devices. It is widely used in the fields of intelligent power, environmental monitoring, intelligent water conservancy, self-service terminal, weather monitoring, intelligent transportation, logistics information, industrial control, etc.

      D9201 series DTU adopts high-performance industrial-grade 32-bit communication processor, and equipped with embedded real-time operating system, and provides industrial serial interface RS232 and RS485 to connect serial devices and realize data transparent transmission function.

      D9201 series DTU supports PC configuration tools, AT command configuration, remote configuration of UOTEK Device Manager Cloud device management cloud platform and TCP/IP realizes a variety of configuration and management methods such as flexible and efficient on-site or remote configuration, reduces the difficulty of post-maintenance, significantly improves construction efficiency, reduces the cost of system operation, and realizes customers to truly experience Wireless communication is convenient and fast.

Features

Industrial grade design to meet the needs of industrial users

- Adopt industrial grade chip design to the harsh operating environment of industrial sites
- IP30 protection level, Safe isolation of housing and system for applications in industrial control sites
- Low power consumption, support +6~35VDC wide voltage power supply, suitable for various field power supply methods
- Comply with DL/T721-2013 power distribution automation remote terminal standard of power industry

Highly reliable design to ensure stable operation of the equipment

- Built-in watchdog technology, self-recovery from faults, ensuring stable operation of the equipment
- Support ICMP detection, PPP layer heartbeat, TCP Keepalive and application layer heartbeat to detect dead connections
- Multi-level link detection and anti-drop mechanism to ensure that the device is permanently online

Easy to use and manage

- Supports industrial serial interfaces, RS232 & RS485
- Support 2-channel DI/DO(optional)
- Support the 2-channel ADC(optional)
- Support TTL leveling serial (optional)
- Support configuration file import and export function
- Support local and remote firmware upgrade, saving manpower and material resources
- Support UOTEK Device Manager Cloud device management cloud platform, batch operation, centralized management

Experience the convenience of wireless communication quickly and with full functionality

- Support MQTT protocol, can quickly dock to Ali cloud platform
- Support transparent data transmission, embedded standard TCP/IP and UDP/IP protocol stack
- Support custom TCP/IP protocol stack implementation mechanism for IP messages
- Support multi-data center polling transmission and concurrent transmission (1-4 data centers)
- Support RS232/RS485 dual-channel data transmission
- Support APN/VPDN network access

Solution

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D9201 series DTU products are especially suitable for the application of data collection and monitoring of distributed unattended sites, and remote configuration and management through the equipment management cloud platform.

It is widely used in the fields of intelligent power, environmental monitoring, intelligent water conservancy, self-service terminal, meteorological monitoring, intelligent transportation, logistics information and industrial control.

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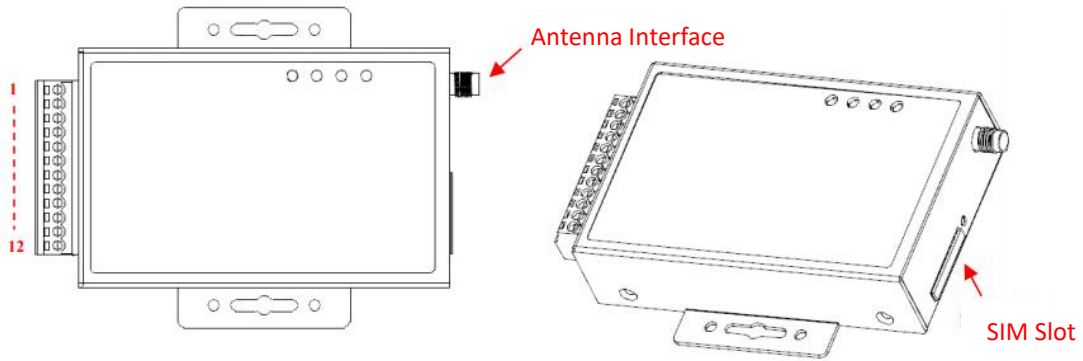
Specification

D9201 Series

	R9701-AS
Specification name	Hardware specification
CPU	Industrial grade 32-bit
4G/LTE	Cat.1 FDD-LTE:B1/B3/B5/B8 TDD-LTE:B34/B38/B39/B40/B41
GSM	EDGE/GPRS/GSM:1800MHz/900MHz
SIM/UIM interface	Support 1.8V/3V SIM/UIM Built-in 15KV ESD protection 1 Drawer cardholder
Industrial serial interface RS-232/RS-485	Serial port 1: RS232/RS485 Serial port 2: RS232 (optional RS485 support) Data bits: 7 bits, 8 bits Stop bit: 1 bit, 2 bits Parity: no parity, odd parity, even parity Baud rate: 1200, 2400, 4800, 9600, 14400, 19200, 38400, 56000, 115200bps Built-in 15KV ESD protection
Antenna interface	1 external antenna connectors, 50 Ohm characteristic impedance, SMA female connector
Indicator light	Power indicator PWR, Data indicator DATA, Network indicator NET
Power interface	Adopt terminal power supply, built-in anti-reverse connection protection, to avoid positive and negative connection error damage equipment
Standard power supply	DC12V/1A, supports overload protection, reverse connection protection
Scope of electricity supply	+6~35VDC (DC Model)
Product size	LxWxH=91.6x59x22mm(without antenna and mountings)

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Idle current	35mA@12VDC
Average current	70mA@12VDC
Peak current	140mA@12VDC
Max. power consumption	1.6W
Ambient temperature and humidity	Storage temperature: -40~75°C Operating temperature: -30~75°C Relative humidity: 5 ~ 95% (no condensing)
Weight	190 g
Housing	Metal housing design, protection level up to IP30
Mounting method	Wall-mounted or Rail-mounted (optional)

D9201 Series

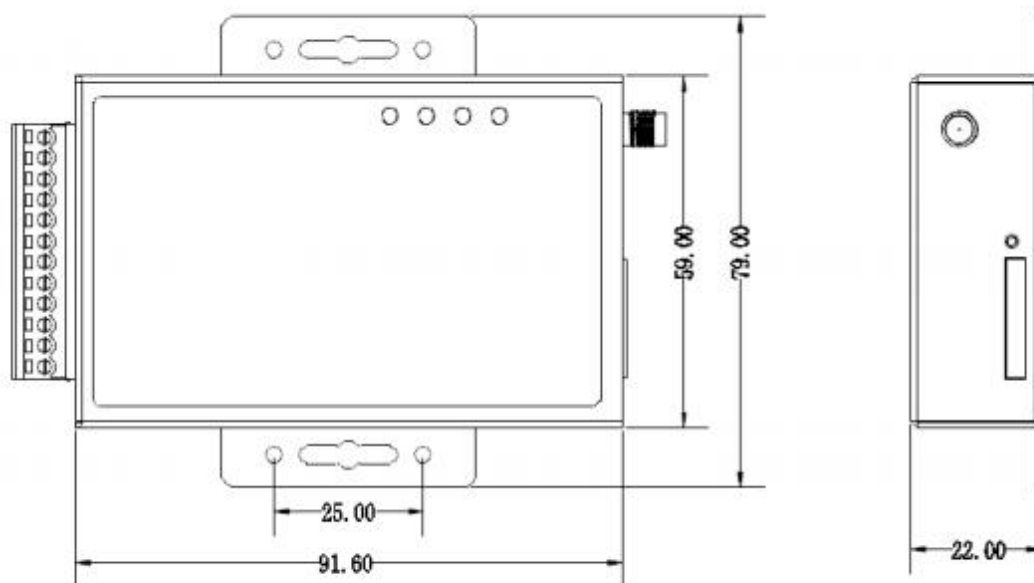|	RD9201-AS
Specification name	Software specification
Network Protocol	Support MQTT protocol, can be quickly connected to Ali cloud platform Support transparent data transmission, embedded standard TCP/IP and UDP/IP protocol stack Support custom TCP/UDP login and heartbeat packets
Multi-Center	Support dual data center backup transmission and multi-data center synchronous transmission, 1-4 centers
Link detection	Support ICMP detection, PPP layer heartbeat, TCP Keepalive and application layer heartbeat to detect dead links Multi-level link detection and anti-drop mechanism to ensure that the device is always online
Built-in watchdog	Support device failure self-recovery to ensure stable operation of the device
Network Security	Support administrative user hierarchy: administrator, maintainer
Management and maintenance	Support configuration tool local serial configuration Support for remote TCP configuration Support configuration file import and export Support local and remote firmware upgrade, saving manpower and material resources Support UOTEK Device Manager Cloud device management cloud platform, batch operation, centralized management

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Appearance

Antenna Interface

SIM Slot

Interface Definition

PIN	Definition	Description
1	PWR	Positive DC power input
2	GND	Negative side of DC power input
3	A	RS485 signal input
4	B	RS485 signal input
5	RX1	Serial port 1 Data reception
6	RX2	Serial port 1 data transmission
7	GND	System signal grounding
8	RX2	Serial port 2 Data reception
9	TX2	Serial port 2 data transmission
10	GND	System signal grounding
11	IO1	System GPIO, accepts up to 3.3V input and output. Non-isolated
12	IO2	System GPIO, accepts up to 3.3V input and output. Non-isolated

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Dimension

LxWxH=91.6x59x22mm

Ordering

D9201 Series			
Model	<F>Communication Types & Modules	<S>Serial port type	<D> I/O Type
D9201-AS	Cat.1 TDD-LTE/FDD-LTE /GPRS	1 RS232, 1 RS485	2 DI/DO

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