

Serial Device Server D224

RS232/485/TTL To TCP/IP



User Manual

Ver 1.0

D224

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This handbook has been designed as a guide to the installation and operation of Serial Server D224. Statements contained in the handbook are general guidelines only and in no way are designed to supersede the instructions contained with other products.

We recommend that the advice of a registered electrician be sought before any Installation work commences.

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【UPGRADE HISTORY】

DATE	FIRMWARE VERSION	HARDWARE VERSION	DESCRIPTION
2019.07.08	V1.0	V1.0	<i>First edition</i>



1. Brief introduction

The D224 Serial Device Server is a useful device to convert RS485/232/TTL data to TCP/IP network, it also can be used as converting Modbus RTU to Modbus TCP, and performs as a serial port converter to create the communication from RS485 to RS232 or TTL, moreover, it can be used as a repeater for two serial device communication directly, e.g.: PLC to PLC.

The D224 Serial Device Server provide a feature that can allow users to select master or slave operation mode for each serial port. It not only allows an Ethernet master to control serial slaves, but also allows serial masters to control Ethernet slaves. It accepts up to 5 connections to communicate at the same time, no matter the Serial Device Server be used as Server or Client.

The D224 Serial Device Server provides a simple and cost-effective way to bring the advantage of remote management and data accessibility to thousand of devices that can not connect to a network. It is the most popular industrial internet of things (IIOT) gateway.

The serial device server suitable for below applications:

Serial Devices to TCP/IP Communication and IoT Cloud Platform;

Serial Devices to Serial Devices communications, e.g.: PLC to PLC;

Equipment networking in the field of access control security;

Various types of configuration software and device communication interfaces;

Networking of transmitters such as water level, water pressure, flow rate and flow rate;

Data transmission in agriculture, water, coal mines, etc.;

Remote monitoring and program download of various PLCs;

Data collection and monitoring of various types of electric meters and meters;

Collection of parameters such as wind speed, wind, rainfall and temperature of the meteorological station;

Remote data acquisition and monitoring of solar power stations and smart charging piles;

Intelligent power grid data transmission;

Intelligent agricultural data collection and monitoring;

Intelligent breeding data collection and monitoring;

Intelligent traffic data collection and monitoring;

Intelligent industrial automation data transmission.

2. Safety Directions



Reasonable Use

Please install the product at suitable places as described in the product documentation.



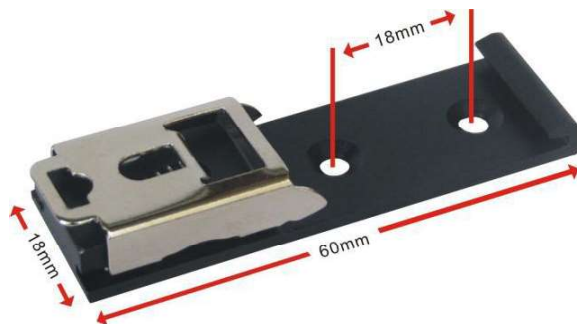
Use Qualified Maintenance Service

Maintenance can be carried out only by qualified maintainer.

3. Standard Packing List

Serial device server D224 unit X1; AC/DC Adaptor X1; Network cable(0.5m) X1; RS232 cable X1.

Optional: 35mm Standard DIN rail fixed Bracket



4. Mainly Features

- Wide working voltage, support 9-36V DC power supply, interface is DC Q2.1 jack and terminal block, and with anti-reverse protection design;
- Built-in industrial grade ARM® Cortex™ core, high performance, stable and reliable;
- Support 1 channel RS-232, 1 channel RS-485 and 1 channel TTL;
- Serial port baud rate supports 4800bps-128000 bps, supports None, Odd, Even check mode;
- Supports 1 channel RJ45 Ethernet port, with link and data indicator, built-in isolation transformer, up to 2KV electromagnetic isolation;
- Support RESET button to recovery the parameters to factory defaults (long press for 3 seconds to recover), prevent parameter setting error;
- Metal shell, protection class IP30, suitable for industrial control applications;
- The configuration software supports WIN XP, WIN 7, WIN 8 and WIN 10, friendly interface;
- Support static IP address or DHCP to obtain IP address automatically, and query the devices in the network through UDP broadcast protocol;
- Support self-defined device name for easy user identification;
- Support server domain name DNS;
- Built-in TCP/IP protocol stack, support transparent transmission and Modbus RTU to Modbus TCP Protocol;
- Supports multiple working modes: TCP Server, TCP Client, UDP Server, and UDP Client;



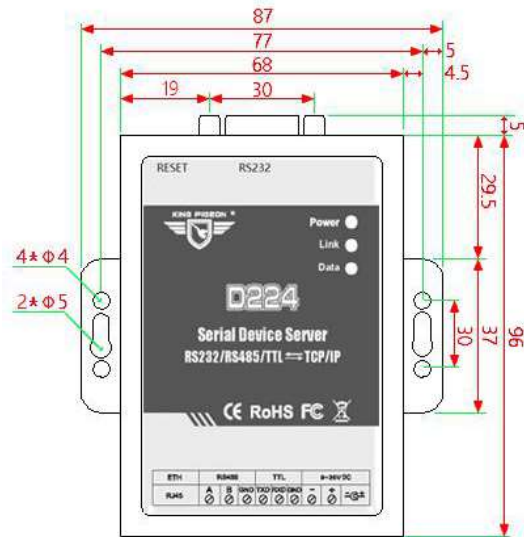
Serial Device Server D224

RS232/485/TTL To TCP/IP

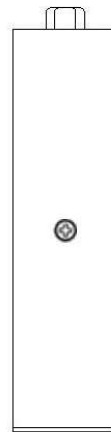
- Supports up to 5 TCP/UDP Clients and 5 TCP/UDP Servers connections simultaneously;
- Supports definition login message and heartbeat package function, can facilitate cloud platform for ID identification and data communication;
- Support automatically connect and reconnect the server after disconnection;
- Support serial port strategy function, data path is free to choose, for example: RS232 and RS485 bi-direction communication (RS232 ⇌ RS485), RS232 and server 1 bi-direction communication (RS232 ⇌ server 1);
- Can be used as a repeater for two serial device communications directly, e.g.: PLC to PLC;
- Support firmware upgrade through TTL, firmware update is more convenient;
- Small in size, 96mm*68mm*25mm, and supports wall mounting and DIN 35mm rail mounting.

5. Physical Layout and Installation Diagram

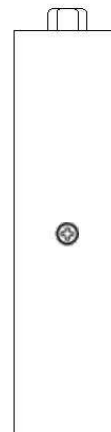
5.1 Control Unit physical layout



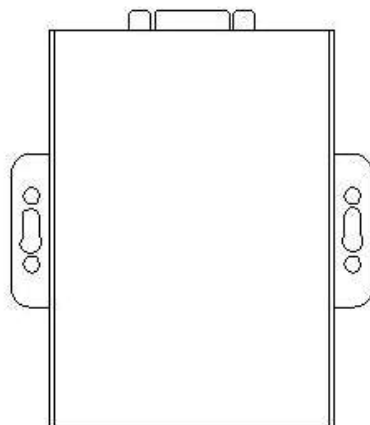
(Front view)



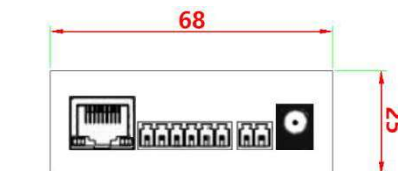
(Left side view)



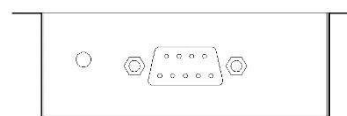
(Right side view)



(Back view)



Bottom view




Vertical view

5.2 Interface Instructions for installation



LED Status Description

LED Status Description		
Power	Power Indicator: Power on the module will always on.	
Link	On stands for TCP connection;otherwise, it is off.	
Data	When transmitting data by Ethernet port, the LED will be on, otherwise, it is off.	
Interface Instructions for installation		
RESET	Reset button. Recovery the parameters to factory default value.	
RS232	RS232 port	
ETH	RJ45,Ethernet port.	
RS485	A	RS485 data A
	B	RS485 data B
	GND	RS485 data ground if required.
TTL	TXD	Transmit data port
	RXD	Receive data port
	GND	Data ground if required
9~36 VDC	-	DC9~36V negative input.
	+	DC9~36V positive input, 1A, for power the device.
		Power jack,for power the device.
	Can only need to choose one way to power the device	