

Control center

Ethernet

Tiny Serial-to-Ethernet
Device Server
tDS-700

RS-232/422/485

RS-232/422/485
Devices

Powerful Tool for Networking Traditional Serial Devices

- Extended cable length
- No need to change the original program
- Designed for host computers without a COM port
- Network integration of RS-232/422/485 serial devices



Tiny Serial-to-Ethernet
Device Server

tDS-700 series

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Product introduction

The tDS-700 series modules are tiny serial-to-Ethernet device servers that use the transparent transmission to allow a host computer to control remote serial devices over an Ethernet network. The tDS-700 series connects RS-232/422/485 devices to Ethernet and increases the number of serial devices and communication distance by taking advantage of the high rate of Ethernet. With the different operating modes provided by tDS-700, the device can meet the needs of various serial devices to upgrade network applications.

Virtual COM Port technology

No change to original program | Suitable for Windows PC

VxComm Utility provides an easy-to-operate interface. With simple settings, users can convert the physical COM port of the tDS-700 series into the virtual COM port of a PC. Without changing the original program, as soon as the virtual COM ports are connected, users can read data from serial devices connected to the tDS-700 series modules via Ethernet.

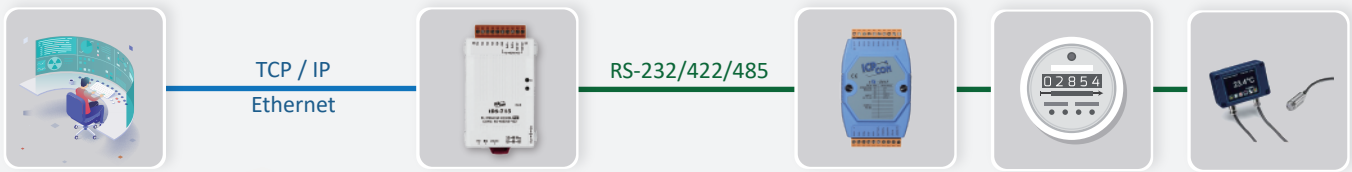


Window PC | Tiny Serial-to-Ethernet Device Server tDS-700 | I/O module I-7017 | Traditional electricity meter | Traditional thermometer

TCP/IP socket connection

Applicable to various operating systems

The socket connection function of various operating systems can create a TCP/IP connection to control the tDS-700 series modules and the serial devices connected to them. For example, users can create a direct socket connection to TCP/IP port 10001 on the tDS-700 series module and then remotely control devices connected to COM1.

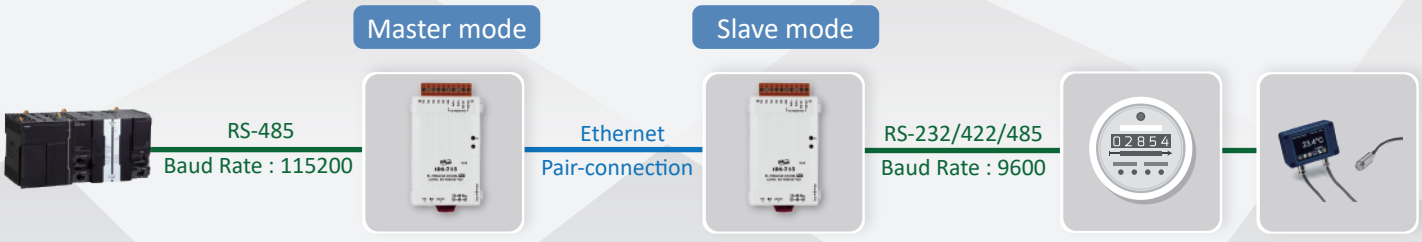


PC | Tiny Serial-to-Ethernet Device Server tDS-700 | I/O module I-7017 | Traditional electricity meter | Traditional thermometer

Pair connection mode

No change to original program | No additional software required

Two tDS-700 series modules can create a pair connection application (serial-bridge or serial-tunnel) to extend the cable length of PLC and equipment that are not connected to Ethernet. Once the pair connection is set up, users can establish a connection, transfer data, and control devices between serial devices that do not have Ethernet capabilities through the TCP/IP protocol. Because of this architecture, devices with different communication formats (Baud Rate) can also communicate with each other.



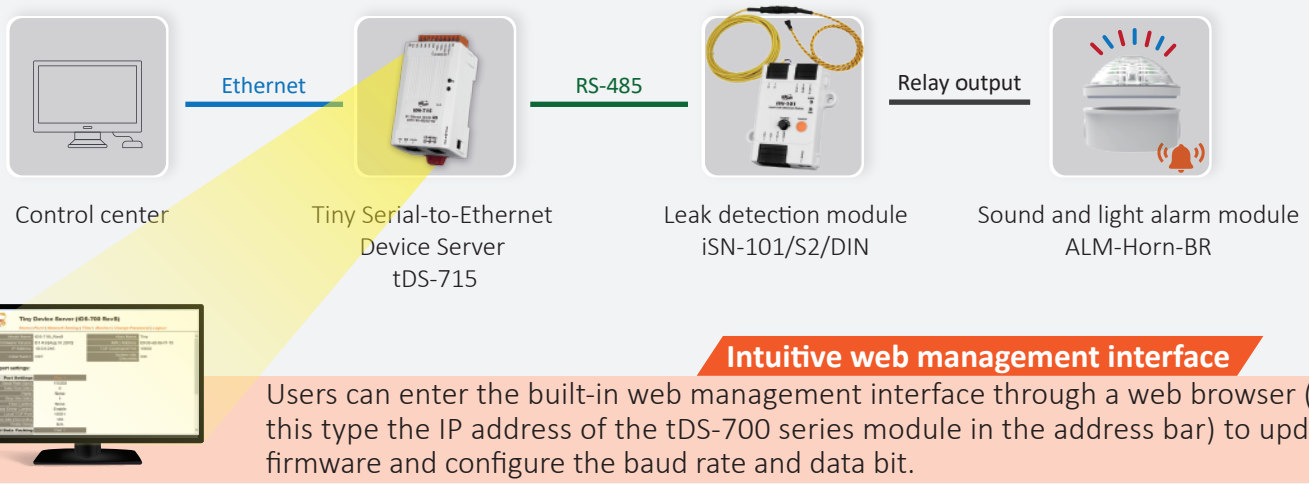
PLC | Tiny Serial-to-Ethernet Device Server tDS-700 | Tiny Serial-to-Ethernet Device Server tDS-700 | Traditional electricity meter | Traditional thermometer

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Application cases

Leakage monitoring in machine rooms

When the leakage appears in the machine room, it often causes the production equipment or production line to stop. Management personnel must send additional cleaning staff to the site, which seriously affects the on-site operation and labor deployment. ICP DAS's leakage monitoring solution uses iSN-101/S2/DIN leakage detection modules to transmit the leakage data detected in the wiring area to the tDS-715 tiny serial-to-Ethernet device server via RS-485, thereby connecting to Ethernet. Users, as well, can install the ICP DAS's ALM-Horn-BR sound and light alarm module, which will be triggered by the iSN-101 liquid leak detection module when leakage appears, thus issuing the sound and LED light alarm.



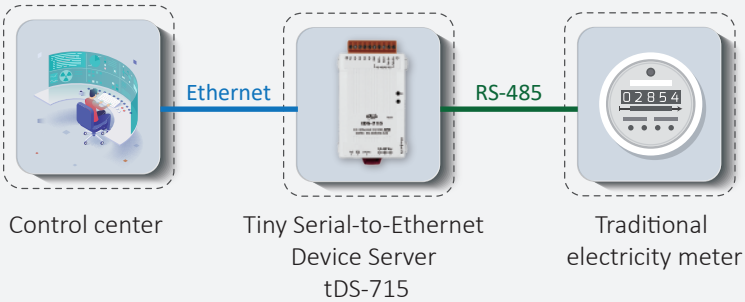
Intuitive web management interface

Users can enter the built-in web management interface through a web browser (for this type the IP address of the tDS-700 series module in the address bar) to update firmware and configure the baud rate and data bit.

Machine rooms/buildings energy monitoring

The energy issue has received a lot of attention recently. Intelligent energy consumption has become an important part of the smart transformation of factories and buildings. ICP DAS's power monitoring solution uses a tDS-715 to receive current and power data from traditional electricity meters via RS-485 and then transmits data through Ethernet. The Ethernet network extends the transmission distance and sends the data back to the control center for real-time power monitoring.

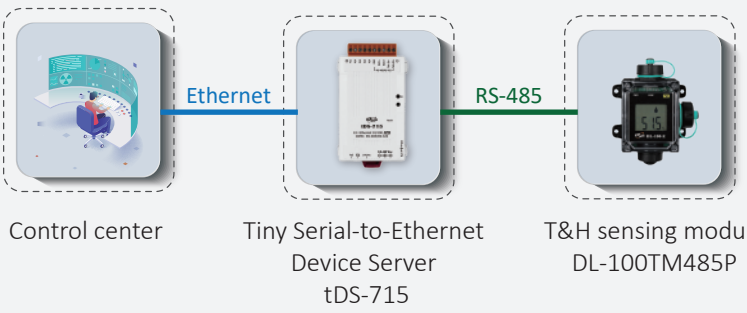




Cleanrooms temperature and humidity monitoring

Compared with other companies, the requirements and specifications for temperature, humidity, and cleanliness in cleanrooms are particularly strict. Cleanrooms application areas include semiconductor production, biochemical technology, biotechnology, precision machinery, pharmaceuticals, and operating rooms in hospitals. ICP DAS's temperature and humidity sensor modules measure temperature and humidity levels and then transmit the collected data to the tDS-715 which connects to Ethernet and sends the data to the control center for the real-time environmental monitoring.





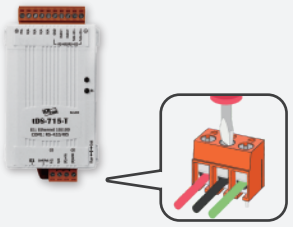
Order information

Model	Model (isolated)	COM Port			PoE	DC Power Input Connector
		RS-232	RS-422	RS-485		
tDS-712	tDS-712i	1	-	-	YES	DC Jack
tDSM-712	-	1	-	-		
tDS-722	tDS-722i	2	-	-		
tDS-732	tDS-732i	3	-	-		
tDS-715	tDS-715i	-	1			
tDS-725	tDS-725i	-	-	2		
tDS-735	tDS-735i	-	-	3		
tDS-718	tDS-718i	1				
-	tDS-718i-D	1				
tDS-724	tDS-724i	1	-	1		
tDS-734	tDS-734i	2	-	1		
tDS-715-T	tDS-715i-T	-	1		NO	Terminal block
tDS-718-T	tDS-718i-T	1				

- Isolated/Non-isolated modules: The "i" version modules of the tDS-700 series have 3000 VDC isolation protection and +/-4 kV ESD protection, which can prevent modules and equipment from being damaged by overvoltage, and are suitable for harsh environments; non-isolated modules are suitable for general office environments.
- The "T" version modules have terminal blocks, which prevent the wire connection from breaking since they must be installed with screws.



tDS-700 series
+
CA-002/DC Jack



tDS-700-T series
+
Terminal block
(mounted with screws)

Related accessories



CA-0915

DB9 Male to DB9 Female Cable



CA-0910F

DB9 Female to DB9 Female Cable



CA-0910N

DB9 Female to DB9 Female Crossover Cable



CA-002

DC jack to 2-wire Power Cable



UP0061D

12PA58G/Power Supply



NS-205PSE-24V

Ethernet Switch

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