2-7 Tiny Serial-to-Ethernet Device Server & Modbus Gateway

tDS-700/tDS-2200 Series

tDS-712   tDS-700 series   tDSM-712   tDS-2200 series

Tiny Serial-to-Ethernet Device Server
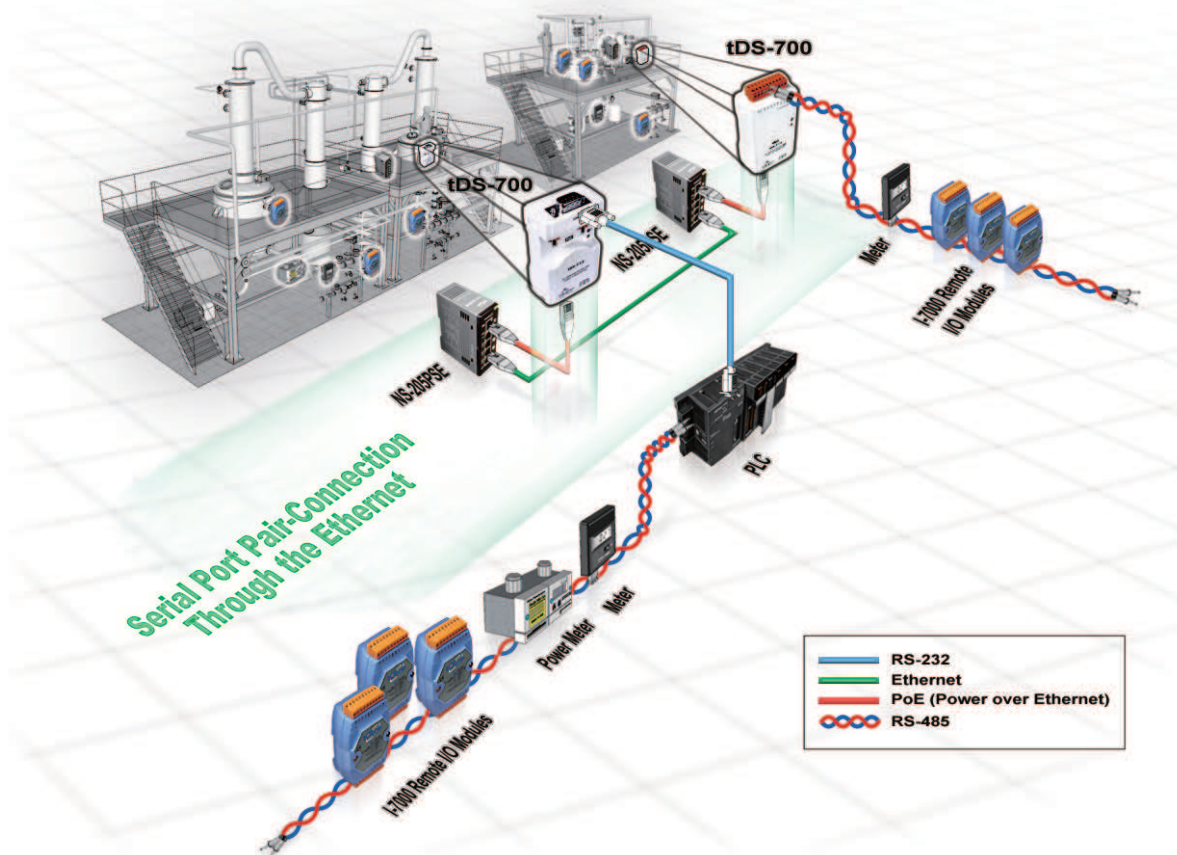
CE FC RoHS PoE

Features ▶▶▶▶

- Incorporates any RS-232/422/485 serial device in Ethernet
- Application Modes: Virtual COM, TCP Server, TCP Client
- Virtual COM for 32/64-bit Windows XP/7/10/2012/2016
- Data Packing Modes: Length, Delimiter, timeout, Char-timeout.
- Supports pair-connection (serial-bridge, serial-tunnel) applications
- Supports UDP responder for device discovery (UDP Search)
- Static IP or DHCP network configuration
- Easy firmware update via the Ethernet (BOOTP, TFTP)
- Tiny Web server for serial and network configuration (HTTP)

- Contains a 32-bit MCU that efficiently handles network traffic
- tDS-700/tDSM-712: 10/100 Base-TX Ethernet, RJ-45 × 1
- tDS-2200: 2-port Ethernet Switch (LAN Bypass for Daisy-Chain Wiring)
- Redundant power inputs: PoE and DC jack
- Allows automatic RS-485 direction control
- 2500 V_{DC} isolation and +/-4 kV ESD protection for i versions
- tDSM-712 is the tDS-712 with Metal Case
- Male DB-9 or terminal block connector for easy wiring
- Tiny form-factor and low power consumption
- RoHS compliant & no Halogen

☾ Introduction

The tDS-700/tDS-2200 is a series of Serial-to-Ethernet device servers designed to add Ethernet and Internet connectivity to any RS-232 and RS-422/485 device, and to eliminate the cable length limitation of legacy serial communication. By using the VxComm Driver/Utility, the built-in COM port of the tDS-700/tDS-2200 series can be virtualized to a standard PC COM port in Windows. Therefore, users can transparently access or monitor serial devices over the Internet/Ethernet without software modification. Note: For multiple TCP connections on the same serial port, use PDS-700 instead.

tDS-700

tDS-700

Serial Port Pair-Connection Through the Ethernet

| RS-232 |
| Ethernet |
| PoE (Power over Ethernet) |
| RS-485 |

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Serial Device Server

The VxComm Driver/Utility supports the most popular operating system in the world, including 32-bit and 64-bit Windows XP/7/10/2012/2016. **The virtual COM works transparently and is protocol independent, enabling perfect integration with your current central computer.** The utility provides an easy configuration interface that can be used to quickly create and map virtual COM ports to one or several tDS-700/tDS-2200 modules. In addition, the utility contains a built-in terminal program, so users can send/receive command/data via the terminal program for easy testing.
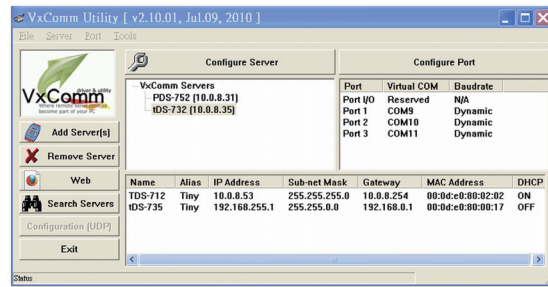
The tDS-700/tDS-2200 device servers can be used to create a pair-connection application (as well as serial-bridge or serial-tunnel), and can then route data over TCP/IP between two serial devices, which is useful when connecting mainframe computers, servers or other serial devices that do not themselves have Ethernet capability. By virtue of its protocol independence and flexibility, the tDS-700/tDS-2200 meets the demands of virtually any network-enabled application.

The tDS-2200 series has a built-in two-port Ethernet switch to implement daisy-chain topology. The cabling is much easier and total costs of cable and switch are significantly reduced. LAN Bypass feature guarantees the Ethernet communication if tDS-2200 loses its power.
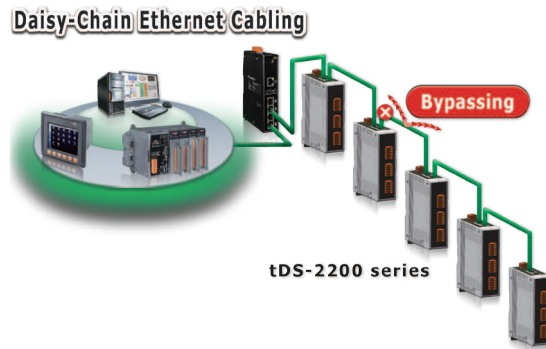
The tDS-700/tDS-2200 features a powerful 32-bit MCU to enable efficient handling of network traffic. It also has a built-in web server that provides an intuitive web management interface to allow users to modify the settings of the module, including DHCP/Static IP, gateway/mask and serial ports.
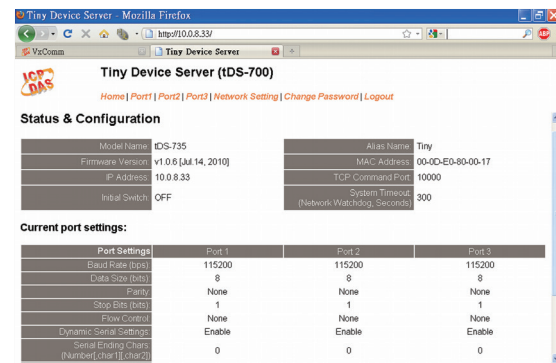
Based on an amazing tiny form-factor, the tDS-700/tDS-2200 achieves the maximum space savings that allows it to be easily installed anywhere, even directly attached to a serial device or embedded into a machine.

The tDS-700/tDS-2200 series also contains a built-in CPU watchdog, which automatically resets the CPU if the built-in firmware is operating abnormally, or if there is no communication between the tDS-700/tDS-2200 and the host for a predefined period of time (system timeout). This is an important feature that ensures the tDS operates continuously, even in harsh environments.

The tDS-700/tDS-2200 offers true IEEE 802.3af-compliant (classification, Class 1) Power over Ethernet (PoE) functionality using a standard category 5 Ethernet cable to receive power from a PoE switch such as the NS-205PSE. If there is no PoE switch on site, the tDS-700/tDS-2200 will also accept power input from a DC adapter. The tDS-700/tDS-2200 is designed for ultra-low power consumption, reducing hidden costs from increasing fuel and electricity prices, especially when you have a huge amount of device servers installed. Reducing the amount of electricity consumed by choosing energy-efficient equipment can have a positive impact on maintaining a green environment.

Low Power Consumption

The tDS-712 is equipped with a male DB-9 connector, while other models are equipped with a removable terminal block connector to allow easy wiring, and also supports automatic RS-485 direction control when sending and receiving data.
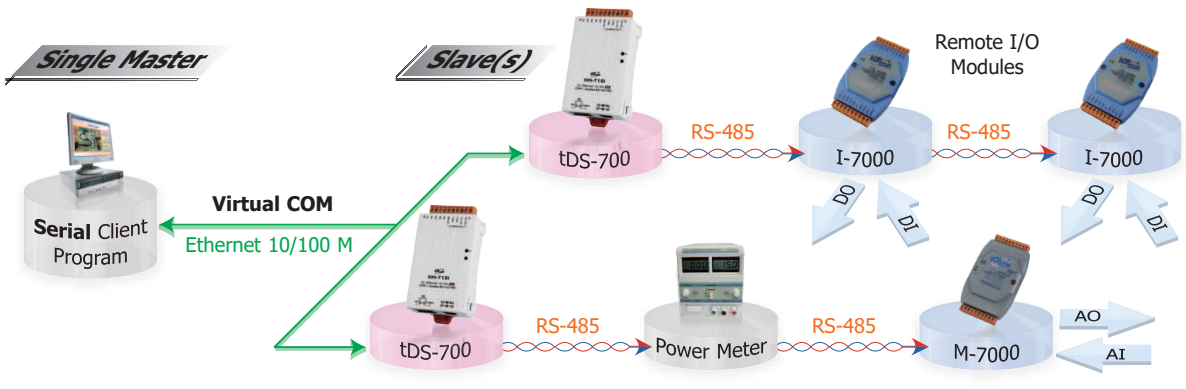
Applications

- Factory Automation
- Building Automation
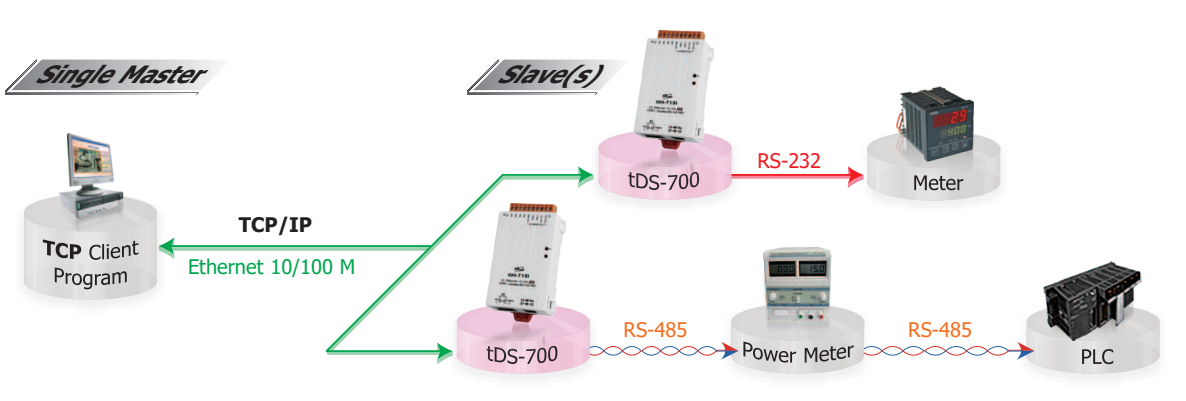- Home Automation
- Remote Diagnosis and Management

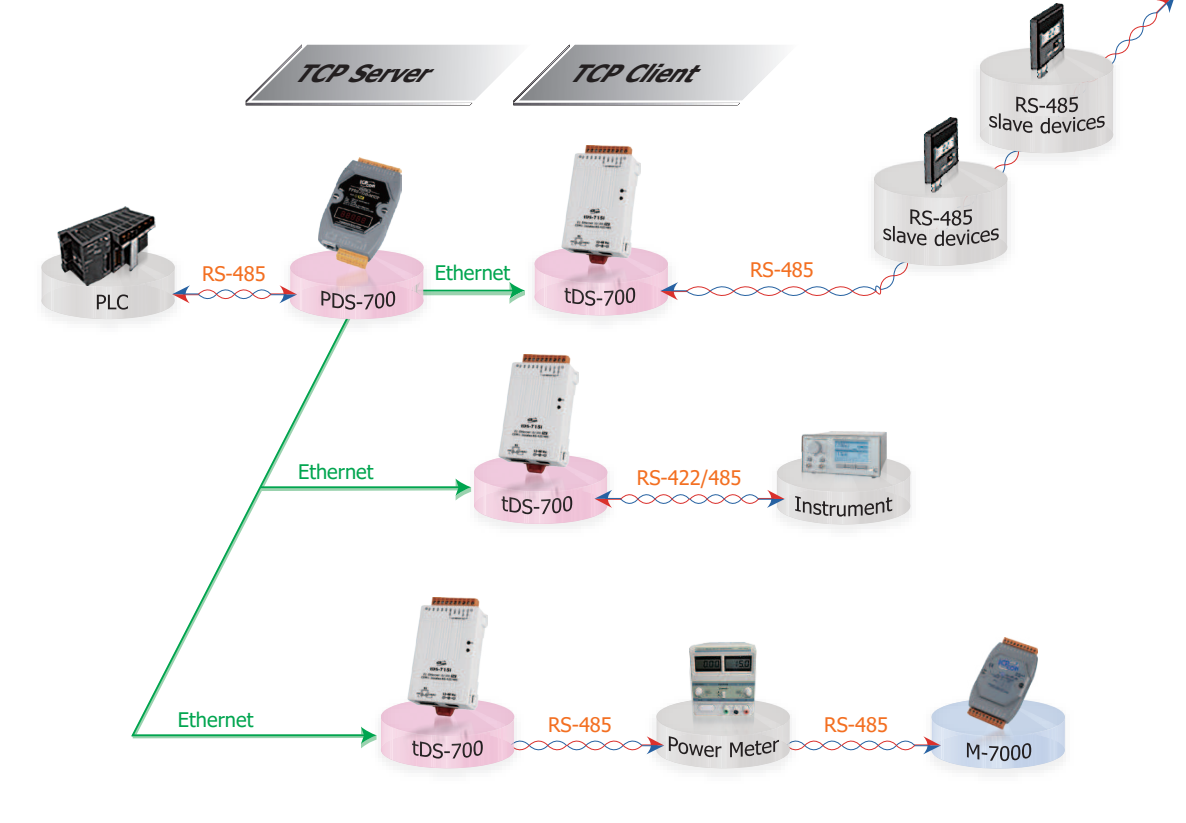| Comparison Table	tDS-700 Series	PDS-700 Series
Ethernet	10/100 M, PoE	10/100 M
Programmable	–	Yes
Virtual COM	Yes	Yes
Virtual I/O	–	Yes
DHCP	Yes	Yes
Web Configuration	Yes	Yes
UDP Search	Yes	Yes
Multi-client	–	Yes
Remarks	Cost-effective	–

1. Access serial device via Virtual COM ports

Single Master

Slave(s)

Remote I/O Modules

tDS-700

RS-485   I-7000   RS-485   I-7000

Virtual COM

Serial Client Program

Ethernet 10/100 M

DO   DI   DO   DI

tDS-700   RS-485   Power Meter   RS-485   M-7000

AO   AI

2. Access serial device via TCP/IP socket connection

Single Master

Slave(s)

tDS-700   RS-232   Meter

TCP/IP

TCP Client Program

Ethernet 10/100 M

tDS-700   RS-485   Power Meter   RS-485   PLC

3. Virtual RS-485 bus application through pair-connection

TCP Server

TCP Client

RS-485 slave devices

RS-485 slave devices

PLC   RS-485   PDS-700   Ethernet   tDS-700   RS-485

Ethernet

tDS-700   RS-422/485   Instrument

Ethernet

tDS-700   RS-485   Power Meter   RS-485   M-7000

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Serial Device Server

tGW-700 Series

Tiny Modbus/TCP to RTU/ASCII Gateway

CE FC RoHS PoE

tGW-712   tGW-700 series   tGW-2200 series

Features ▶▶▶▶

- Supports Modbus TCP/UDP master and slave
- Supports Modbus RTU/ASCII master and slave
- Max. TCP masters per serial port: 32 (RevB)
- Read-cache ensures faster Modbus TCP/UDP response
- Supports UDP responder for device discovery (UDP Search)
- Static IP or DHCP network configuration
- Easy firmware update via the Ethernet (BOOTP, TFTP)
- Tiny Web server for serial and network configuration (HTTP)
- Redundant power inputs: PoE and DC jack

- tGW-700: 10/100 Base-TX Ethernet, RJ-45 × 1
- tGW-2200: 2-port Ethernet Switch (LAN Bypass for Daisy-Chain Wiring
- Allows automatic RS-485 direction control
- 2500 V_{DC} isolation and +/-4 kV ESD protection for i versions
- Male DB-9 or terminal block connector for easy wiring
- Tiny form-factor and low power consumption
- RoHS compliant & no Halogen

⟡ Introduction

Modbus has become a de facto standard industrial communication protocol, and is now the most commonly available means of connecting industrial electronic devices. Modbus allows for communication between many devices connected to the same RS-485 network, for example, a system that measures temperature and humidity and communicates the results to a computer. Modbus is often used to connect a supervisory computer with a remote terminal unit (RTU) in supervisory control and data acquisition (SCADA) systems.

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Serial Device Server
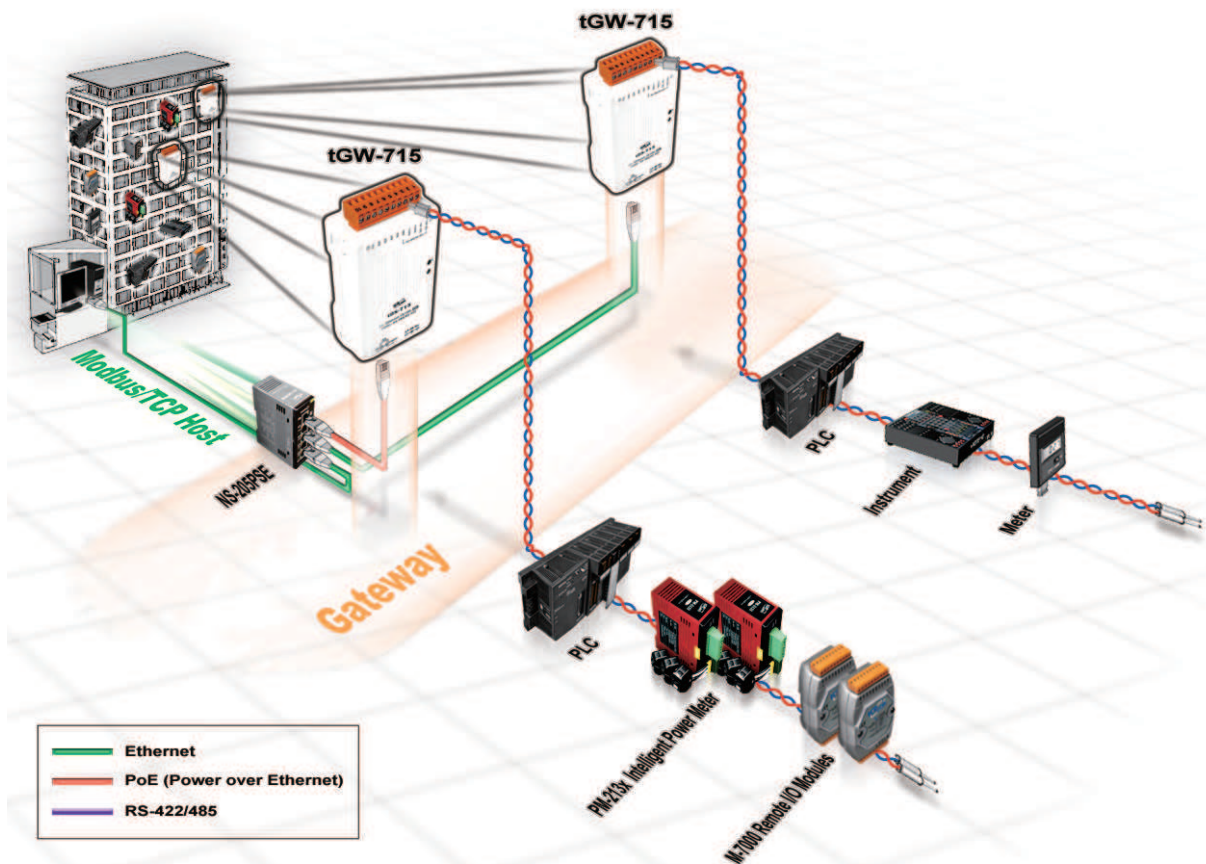
The **tGW-700/tGW-2200 module is a Modbus gateway that enables a Modbus TCP/UDP host to communicate with serial Modbus RTU/ASCII devices through an Ethernet network, and eliminates the cable length limitation of legacy serial communication devices.** The module can be used to create a pair-connection application (as well as serial-bridge or serial-tunnel application), and can then route data over TCP/IP between two serial Modbus RTU/ASCII devices, which is useful when connecting mainframe computers, servers or other serial devices that use Modbus RTU/ASCII protocols and do not themselves have Ethernet capability.

The maximum number of TCP connections for each serial port is up to 32(RevB), this allows multiple masters accessing slave devices on the same serial port. The **read-cache function** is used to store previous requests and responses in the memory buffer of the tGW-700/tGW-2200 module. When other HMI/SCADA master controllers send the same requests to the same RTU slave device, the cached response is returned immediately. **This feature dramatically reduces the loading on the serial port communication, ensures faster TCP responses, and improves the stability of the entire system.**

The tGW-2200 series has a built-in two-port Ethernet switch to implement daisy-chain topology. The cabling is much easier and total costs of cable and switch are significantly reduced. LAN Bypass feature guarantees the Ethernet communication if tGW-2200 loses its power.

The tGW-700/tGW-2200 module features a powerful 32-bit MCU to enable efficient handling of network traffic, and also has a built-in web server that provides an intuitive web management interface that allows users to modify the configuration of the module, including the DHCP/Static IP, the gateway/mask settings and the serial port settings.

The CPU watchdog automatically resets the CPU if the built-in firmware is operating abnormally, while the host watchdog automatically resets the CPU if there is no communication between the module and the host (PC or PLC) for a predefined period of time (system timeout). The dual watchdog is an important feature that ensures the module operates continuously, even in harsh environments.

The tGW-700/tGW-2200 module offers true IEEE 802.3af-compliant (classification, Class 1) Power over Ethernet (PoE) functionality using a standard category 5 Ethernet cable to receive power from a PoE switch such as the NS-205PSE. If there is no PoE switch on site, the module will also accept power input from a DC adapter. The tGW-700/tGW-2200 module is designed for ultra-low power consumption, reducing hidden costs from increasing fuel and electricity prices, especially when you have a large number of modules installed. Reducing the amount of electricity consumed by choosing energy-efficient equipment can have a positive impact on maintaining a green environment.

Based on an amazing tiny form-factor, the tGW-700/tGW-2200 achieves maximum space savings that allows it to be easily installed anywhere, even directly embedded into a machine. It also supports automatic RS-485 direction control when sending and receiving data, thereby improving the stability of the RS-485 communication.

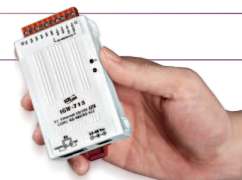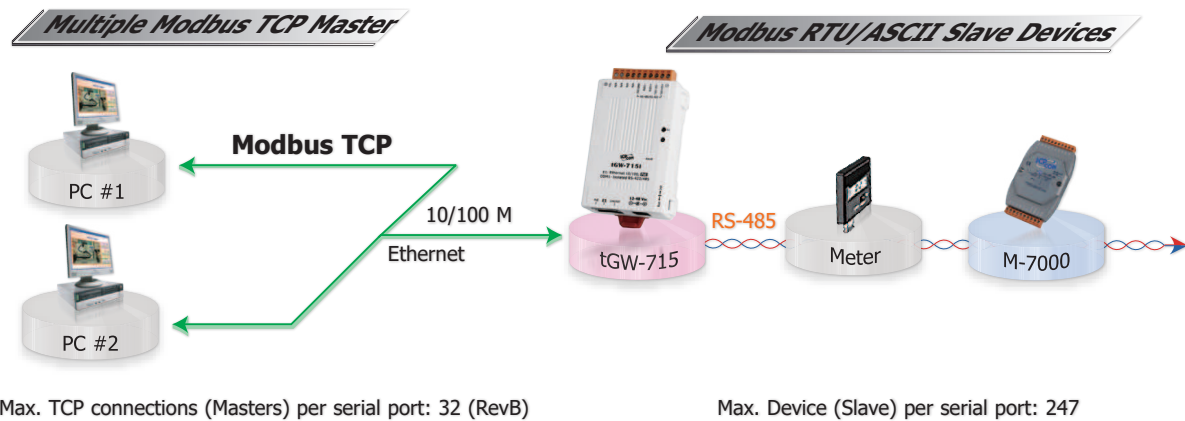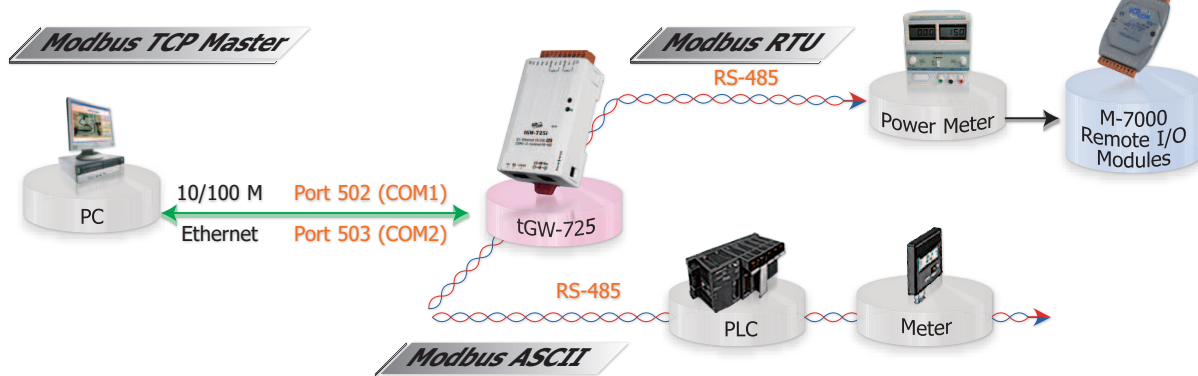| Comparison Table	Ethernet	Programmable	Virtual COM	Virtual I/O	DHCP	Web Configuration	UDP Search	Modbus Gateway	Multi-client
tGW-700 Series	10/100 M, PoE	–	–	–	Yes	Yes	Yes	Yes	Yes
PPDS-700-MTCP Series	10/100 M, PoE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
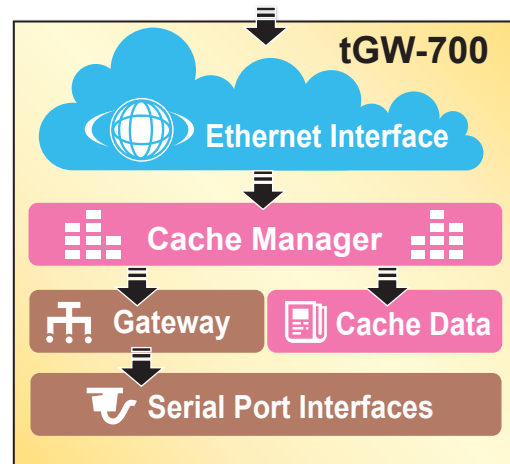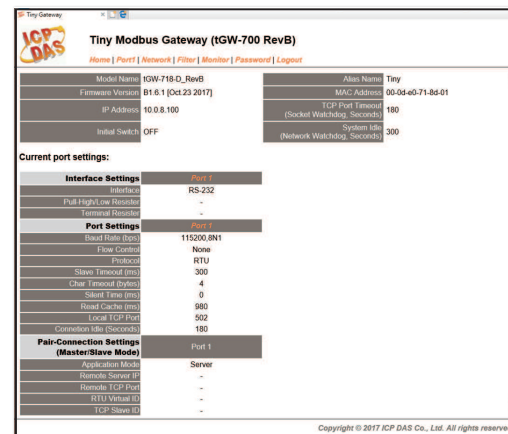
Applications

- Factory Automation
- Building Automation
- Home Automation
- Remote Diagnosis and Management

1. Modbus TCP Masters to RTU/ASCII Gateway application
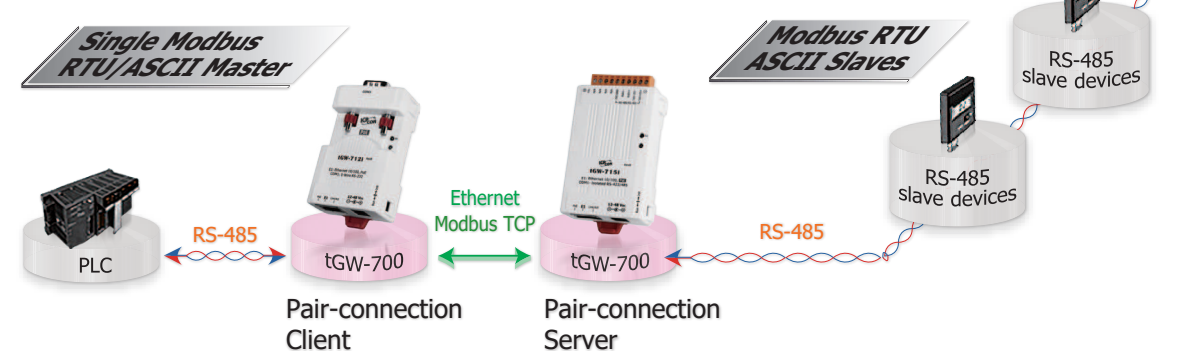
Multiple Modbus TCP Master

Modbus RTU/ASCII Slave Devices

Modbus TCP

PC #1

PC #2

10/100 M
Ethernet

tGW-715

RS-485

Meter

M-7000

Max. TCP connections (Masters) per serial port: 32 (RevB)   Max. Device (Slave) per serial port: 247

2. Modbus TCP to RTU/ASCII Gateway application (dual-port)

Modbus TCP Master

Modbus RTU

RS-485

Power Meter

M-7000
Remote I/O
Modules

PC

10/100 M   Port 502 (COM1)
Ethernet   Port 503 (COM2)

tGW-725

RS-485

PLC

Meter

Modbus ASCII

3. Modbus RTU/ASCII to TCP Gateway application (like pair-connection)

*Single Modbus
RTU/ASCII Master*

Single Modbus TCP Slave

PLC

RS-232/422/485

tGW-700

Ethernet
Modbus TCP

PETL-7000

PET-7000

SCADA/HMI

Pair-connection Client
(Modbus TCP Master)

4. Virtual RS-485 bus application through pair-connection

*Single Modbus
RTU/ASCII Master*

*Modbus RTU
ASCII Slaves*

RS-485
slave devices

PLC

RS-485

tGW-700

Ethernet
Modbus TCP

tGW-700

RS-485

RS-485
slave devices

Pair-connection
Client

Pair-connection
Server

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Serial Device Server
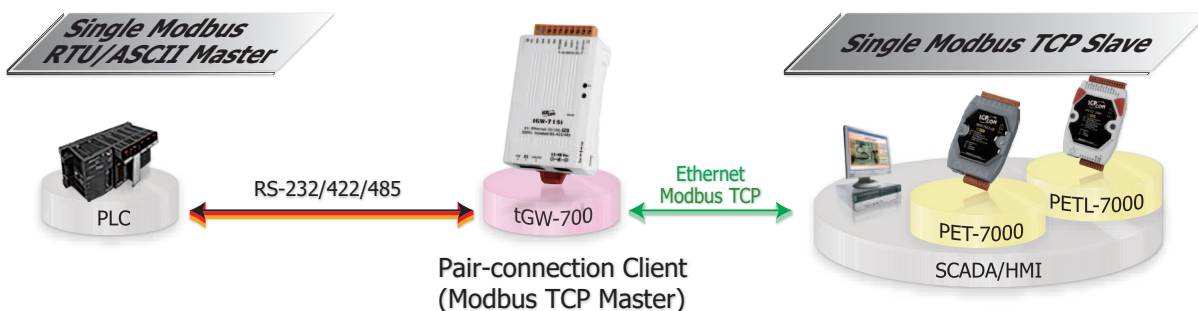
tSH-700 Series

Tiny Serial Port Sharer

tSH-700 series

CE FC RoHS [X] PoE

Features ▶▶▶▶

- Supports baud rate conversion application
- Supports two masters sharing one slave port
- Read-cache ensures faster response
- Redundant power inputs: PoE and DC jack
- Tiny form-factor and low power consumption
- Supports Modbus RTU/ASCII protocol conversion

- Raw data mode for most query-response protocols
- Built-in web server for easy configuration (HTTP)
- Allows automatic RS-485 direction control
- 2500 V_{DC} isolation and +/-4 kV ESD protection for i versions

Introduction

Following the success of the original tGW-700/tDS-700 modules, ICP DAS has continued to develop new functions for these products in order to provide increased support for a greater number of applications. The tGW-700 modules are Modbus TCP-to-Serial gateway, while the tSH-700 modules are Serial Port Sharers working as Serial-to-Serial converters. The tSH-700 module provides a number of functions, including "Baud Rate Conversion", "Modbus RTU/ASCII Conversion" and "Two Masters Share One Slave". The built-in web server provides easy configuration interface, and no console commands are required.

- **Baud Rate Conversion:**

This function allows a single master device to communicate with slave devices using different baud rates and data formats. Most query-response protocols (half-duplex), e.g. DCON, are supported in the raw data mode. Full-duplex communication should also work when the data size is smaller than the built-in 512 bytes buffer on each serial port.

- **Modbus RTU/ASCII Conversion:**

This function allows a single Modbus RTU/ASCII master device to communicate with Modbus RTU/ASCII slave devices using different protocols, baud rates and data formats.

- **Two Masters Share One Slave:**

This function allows two master devices connected to different serial ports to share slave devices. The queries from the masters are queued in the tSH-700 module and then processed one-by-one. Modbus mode can be used to convert the Modbus RTU/ASCII protocols, while raw data mode can be used for DCON or other query-response protocols. Different baud rates and data formats can also be used on the different serial ports.
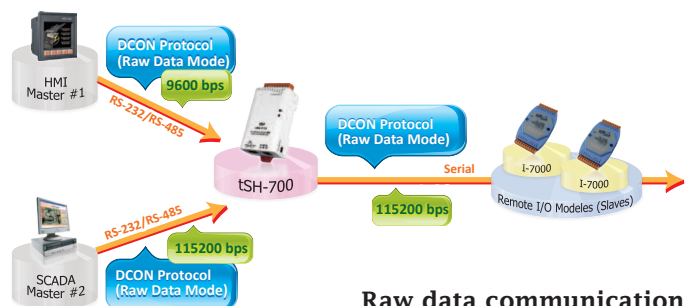
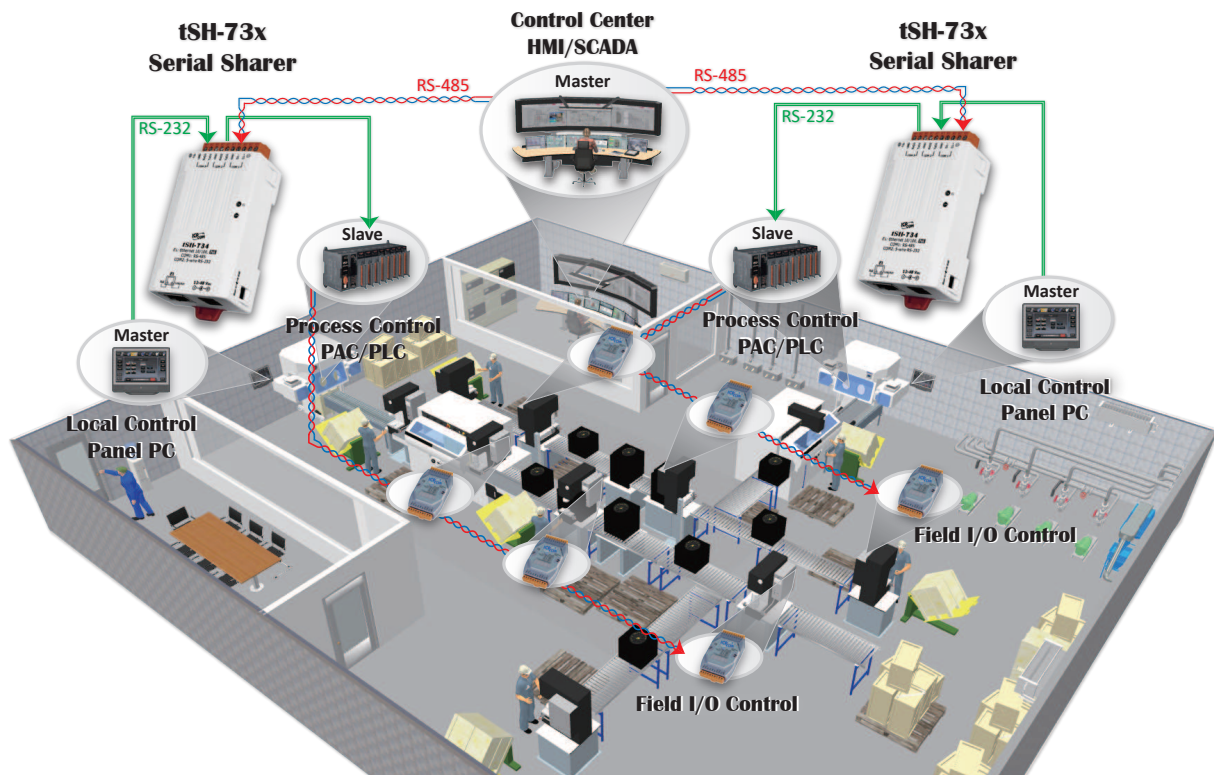**Raw data communication**

- **Read-Cache Function:**

The built-in read-cache function is used to store previous requests and responses of the Modbus messages in the memory buffer of the tSH-700 module. When other HMI/SCADA master controllers requiring the same information from the same salve RTU device, the cached response is returned immediately. This feature dramatically reduces the loading on the slave serial port communication, ensures faster responses to the master, and improves the stability of the entire system.

Protocol conversion

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Serial Device Server
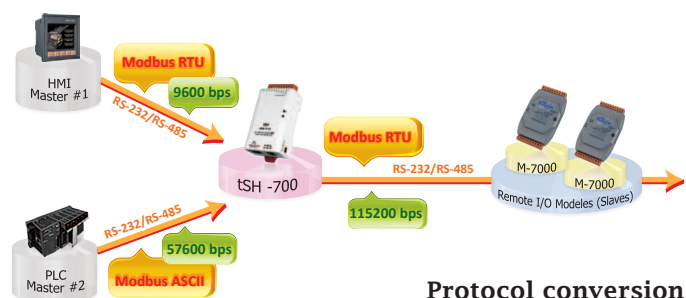
Applications

Accessing a Process Controller from Local Panel and Control Center

Control Office Lightings from Two HMI Devices (Masters) in Different Places

System Specifications

Models	tDS-712 tDS-712i tDSM-712 tDS-2212 tGW-712 tGW-712i tGW-2212	tDS-722 tDS-722i tGW-722 tGW-722i tSH-722 tSH-722i	tDS-732 tDS-732i tGW-732 tGW-732i tSH-732 tSH-732i	tDS-715 tDS-715i tDS-2215 tGW-715 tGW-715i tGW-2215	tDS-725 tDS-725i tDS-2225 tGW-725 tGW-725i tGW-2225 tSH-725 tSH-725i	tDS-735 tDS-735i tDS-2235 tGW-735 tGW-735i tGW-2235 tSH-735 tSH-735i	tDS-718 tDS-718i tDS-2218 tGW-718 tGW-718i tGW-2218	tDS-724 tDS-724i tGW-724 tGW-724i tSH-724 tSH-724i	tDS-734 tDS-734i tGW-734 tGW-734i tSH-734 tSH-734i
System									
CPU	32-bit MCU								
Communication Interface									
Ethernet — 700 Series	10/100 Base-TX, 8-pin RJ-45 x 1, (Auto-negotiating, Auto-MDI/MDIX, LED indicator)								
Ethernet — 2200 Series	2-Port 10/100 Base-TX Ethernet Switch with LAN Bypass, RJ-45 x 2 (Auto-negotiating, Auto-MDI/MDIX, LED indicator)								
PoE	IEEE 802.3af, Class 1								
COM Port	1 × RS-232	2 × RS-232	3 × RS-232	1 × RS-422/ RS-485	2 × RS-485	3 × RS-485	1 × RS-232 or RS-422/485	1 × RS-485 1 × RS-232	1 × RS-485 2 × RS-232
Self-Tuner	–			Yes, automatic RS-485 direction control					
Isolation	**1000 V$_{DC}$ (Power isolation for i version)**			**3000 V$_{DC}$ (Signal isolation for i version)**					
ESD Protection	+/-4 kV								
COM Port Capability (16C550 or compatible UART)									
Baud Rate	115200 bps Max.								
Data Bit	5, 6, 7, 8								
Parity	None, Odd, Even, Mark, Space								
Stop Bit	1, 2								
Power									
Power Input	IEEE 802.3af, Class 1 for PoE; +12 ~ 48 V$_{DC}$ for DC Jack								
Power Consumption	0.07 A @ 24 V$_{DC}$								
Mechanical									
Connector — 700 Series	Male DB-9 x 1 | 10-pin Removable Terminal Block x 1								
Connector — 2200 Series	5-pin Removable Terminal Block x 3								
Dimensions (W x H x D) — 700 Series	52 mm x 95 mm x 27 mm (tDS/tGW-712: 52 mm x 90 mm x 27 mm) (tDSM-712: 75 mm x 83 mm x 24 mm)								
Dimensions (W x H x D) — 2200 Series	90mm x 110mm x 33mm (without connectors)								
Installation	DIN-Rail mounting								
Case	Metal for tDSM-712; Plastic for others.								
Environment									
Operating Temperature	-25 °C ~ +75 °C								
Storage Temperature	-30 °C ~ +80 °C								
Humidity	10 ~ 90% RH, non-condensing								

Pin Assignments
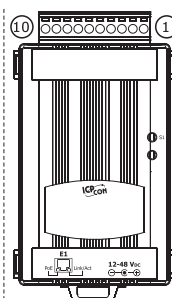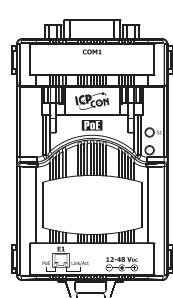
tDS-712(i)/tDSM-712/tGW-712(i)

COM1 (Male DB-9)		
	09	N/A
	08	CTS1
	07	RTS1
	06	N/A
	05	GND
	04	N/A
	03	TxD1
	02	RxD1
	01	N/A

tDS-722(i)/tGW-722(i)/tSH-722(i)

	10	F.G.
COM2	09	CTS2
	08	RTS2
	07	RxD2
	06	TxD2
	05	GND
COM1	04	CTS1
	03	RTS1
	02	RxD1
	01	TxD1

tDS-732(i)/tGW-732(i)/tSH-732(i)

	10	F.G.
COM3	09	GND
	08	RxD3
	07	TxD3
	06	GND
COM2	05	RxD2
	04	TxD2
	03	GND
COM1	02	RxD1
	01	TxD1

tDS-735(i)/tGW-735(i)/tSH-735(i)

	10	F.G.
COM3	09	GND
	08	D3-
	07	D3+
	06	GND
COM2	05	D2-
	04	D2+
	03	GND
COM1	02	D1-
	01	D1+

tDS-718(i)/tGW-718(i)

	10	F.G.
RS-232	09	N/A
	08	GND
	07	RxD1
	06	TxD1
	05	GND
RS-485/ RS-422	04	RxD1-
	03	RxD1+
	02	TxD1-/D1-
	01	TxD1+/D1+

tDS-715(i)/tGW-715(i)

	10	F.G.
	09	N/A
	08	N/A
	07	N/A
	06	N/A
	05	GND
RS-485/ RS-422	04	RxD1-
	03	RxD1+
	02	TxD1-/D1-
	01	TxD1+/D1+

tDS-725(i)/tGW-725(i)/tSH-725(i)

	10	F.G.
	09	N/A
	08	N/A
	07	N/A
	06	GND
COM2	05	D2-
	04	D2+
	03	GND
COM1	02	D1-
	01	D1+

tDS-724(i)/tGW-724(i)/tSH-724(i)

	10	F.G.
	09	N/A
	08	CTS2
	07	RTS2
COM2	06	GND
	05	RxD2
	04	TxD2
	03	GND
COM1	02	D1-
	01	D1+

tDS-734(i)/tGW-734(i)/tSH-734(i)

	10	F.G.
	09	GND
COM3	08	RxD3
	07	TxD3
	06	GND
COM2	05	RxD2
	04	TxD2
	03	GND
COM1	02	D1-
	01	D1+

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Serial Device Server

Ordering Information

Note: ▶ Available soon

Non-Isolated	Isolated	2-port Ethernet Switch	Serial Device Server: Includes one CA-002 cable.
tDS-712 CR	tDS-712i CR	▶tDS-2212	Tiny Device Server with PoE and 1 RS-232 Port (RoHS)
tDS-722 CR	tDS-722i CR	-	Tiny Device Server with PoE and 2 RS-232 Ports (RoHS)
tDS-732 CR	tDS-732i CR	-	Tiny Device Server with PoE and 3 RS-232 Ports (RoHS)
tDS-715 CR	tDS-715i CR	▶tDS-2215	Tiny Device Server with PoE and 1 RS-422/485 Port (RoHS)
tDS-725 CR	tDS-725i CR	▶tDS-2225	Tiny Device Server with PoE and 2 RS-485 Ports (RoHS)
tDS-735 CR	tDS-735i CR	▶tDS-2235	Tiny Device Server with PoE and 3 RS-485 Ports (RoHS)
tDS-718 CR	▶tDS-718i CR	▶tDS-2218	Tiny Device Server with PoE and 1 RS-232/422/485 Port (RoHS)
tDS-724 CR	tDS-724i CR	-	Tiny Device Server with PoE, 1 RS-485 and 1 RS-232 Ports (RoHS)
tDS-734 CR	tDS-734i CR	-	Tiny Device Server with PoE, 1 RS-485 and 2 RS-232 Ports (RoHS)
tDSM-712 CR	-	-	Tiny Device Server with PoE and 1 RS-232 Port (Metal case, RoHS)
Non-Isolated	**Isolated**	**2-port Ethernet Switch**	**Modbus/TCP to RTU/ASCII Gateway: Includes one CA-002 cable.**
tGW-712 CR	tGW-712i CR	▶tGW-2212	Tiny Modbus/TCP to RTU/ASCII Gateway with PoE and 1 RS-232 Port (RoHS)
tGW-722 CR	tGW-722i CR	-	Tiny Modbus/TCP to RTU/ASCII Gateway with PoE and 2 RS-232 Ports (RoHS)
tGW-732 CR	tGW-732i CR	-	Tiny Modbus/TCP to RTU/ASCII Gateway with PoE and 3 RS-232 Ports (RoHS)
tGW-715 CR	tGW-715i CR	▶tGW-2215	Tiny Modbus/TCP to RTU/ASCII Gateway with PoE and 1 RS-422/485 (RoHS)
tGW-725 CR	tGW-725i CR	▶tGW-2225	Tiny Modbus/TCP to RTU/ASCII Gateway with PoE and 2 RS-485 Ports (RoHS)
tGW-735 CR	tGW-735i CR	▶tGW-2235	Tiny Modbus/TCP to RTU/ASCII Gateway with PoE and 3 RS-485 Ports (RoHS)
tGW-718 CR	▶tGW-718i CR	▶tGW-2218	Tiny Modbus/TCP to RTU/ASCII Gateway with PoE and 1 RS-232/422/485 Port (RoHS)
tGW-724 CR	tGW-724i CR	-	Tiny Modbus/TCP to RTU/ASCII Gateway with PoE, 1 RS-485 and 1 RS-232 Ports (RoHS)
tGW-734 CR	tGW-734i CR	-	Tiny Modbus/TCP to RTU/ASCII Gateway with PoE, 1 RS-485 and 2 RS-232 Ports (RoHS)
Non-Isolated	**Isolated**	**2-port Ethernet Switch**	**Serial Port Sharer: Includes one CA-002 cable.**
tSH-722 CR	tSH-722i CR	-	Tiny Serial Port Sharer with PoE and 2 RS-232 Ports (RoHS)
tSH-732 CR	tSH-732i CR	-	Tiny Serial Port Sharer with PoE and 3 RS-232 Ports (RoHS)
tSH-725 CR	tSH-725i CR	-	Tiny Serial Port Sharer with PoE and 2 RS-485 Ports (RoHS)
tSH-735 CR	tSH-735i CR	-	Tiny Serial Port Sharer with PoE and 3 RS-485 Ports (RoHS)
tSH-724 CR	tSH-724i CR	-	Tiny Serial Port Sharer with PoE, 1 RS-485 and 1 RS-232 Ports (RoHS)
tSH-734 CR	tSH-734i CR	-	Tiny Serial Port Sharer with PoE, 1 RS-485 and 2 RS-232 Ports (RoHS)

Accessories

CA-002
DC connector to 2-wire power cable, 0.3 M

CA-0915
Male DB-9 to Female DB-9 Cable, 1.5 m

CA-0910F
Female DB-9 to Female DB-9 Cable, 1.0 m

CA-0910N
DB-9 Female-Female 3-wire Null Modem Cable, 1M

CA-PC09F
DB-9 Female Connector with Plastic Cover

FRA05-S12-SU CR
12V/0.58A (max.) Power Supply (RoHS, for tDS/tGW-700)

DIN-KA52F CR
24V/1.04A, 25 W Power Supply with DIN-Rail Mounting (RoHS, for NS-205 and NS-205PSE-24V)

DIN-KA52F-48 CR
48V/0.52A, 25 W Power Supply with DIN-Rail Mounting (RoHS, for NS-205PSE)

NS-205PSE CR
Unmanaged Ethernet Switch with 4 PoE Ports and 1 RJ-45 Uplink (RoHS)

NS-205PSE-24V CR
Unmanaged 5-port 10/100 Mbps PoE (PSE) Ethernet Switch; 24 V$_{DC}$ Input (RoHS)