


# tM-752N Series

Tiny Addressable Serial Converter

## Features

- Integrates any RS-232 serial device
- Includes redundant power inputs: PoE and DC jack
- Provides automatic RS-485 direction control
- Includes a UDP responder for device discovery
- Provides an intuitive web configuration interface
- Terminal block connector for easy wiring
- Tiny form-factor and low power consumption

## Introduction

There are many RS-232 devices that are used in industrial applications. Nowadays, it has become important to link all these RS-232 devices together for automation purposes and for extracting information. Usually, those RS-232 devices are at a distance from the host PC and may be widely distributed throughout the factory. The tM-752N can be used to link multiple distributed RS-232 devices using a single RS-485 network. The RS-485 is renowned for its easy maintenance, simple cabling, stability, reliability and low cost. tM-752N is non-programmable and cost-effective module, while the I-752N is programmable.

### *Easy Configuration (DCON & Web)*

The tM-752N series supports the DCON protocol, allowing users to modify the settings of the module, such as the serial port configuration and the operation mode, etc. The module also has a built-in web server which provides an intuitive web management interface that simplifies the configuration of the module.

### *Onboard 1 KB Queue buffer*

The tM-752N series module is equipped with a 1 KB queue buffer for its local RS-232 device. All data can be stored in the queue buffer until the host PC has time to read it. This feature allows the host PC to link many low-speed RS-232 devices without suffering any data loss, and also makes it easier for baud rate converter applications to be implemented.

### *Self-Tuner ASIC inside*

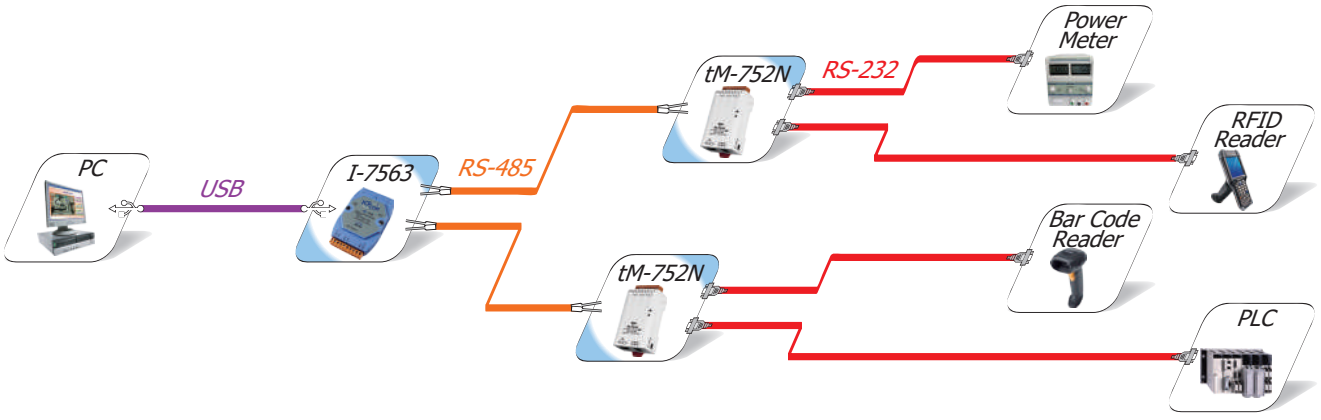
The built-in Self-Tuner ASIC on an RS-485 port can automatically detect and control the send/receive direction of the RS-485 network. Consequently, there is no need for application programs to be concerned with direction control of the RS-485 network.

### *Addressable RS-232 to RS-485 Converter*

Most RS-232 devices don't support device addressing. The ICP DAS tM-752N series module assigns a unique address for each RS-232 device installed. When a command with a device address is sent to the RS-485 network, the destination tM-752N module removes the address field, and then passes the commands to the specified local RS-232 device. The response from the local RS-232 device will be returned to the host PC via the tM-752N.

## Applications

Factory Automation | Building Automation | Home Automation





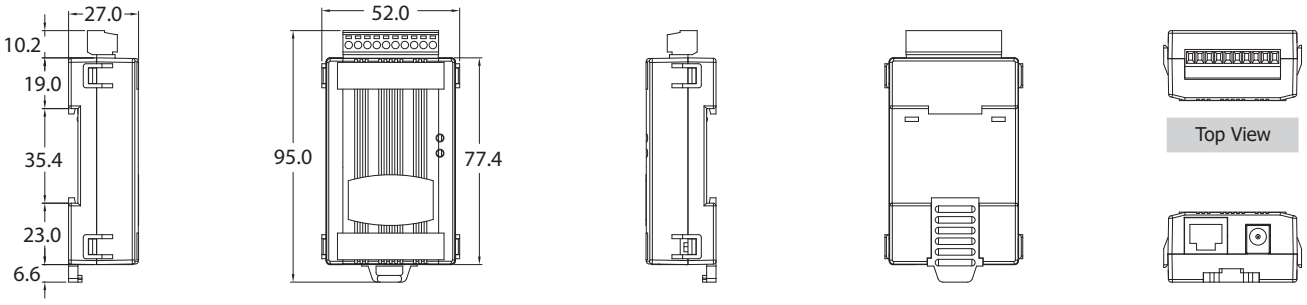

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## System Specifications

| Models | | tM-7521 | tM-7522 |
|---|---|---|---|
| **System** | | | |
| CPU | | 32-bit MCU | |
| **Communication Interface** | | | |
| Ethernet | | 10/100 Base-TX, 8-pin RJ-45 x 1 (Auto-negotiating, Auto-MDI/MDIX, LED indicator), PoE (IEEE 802.3af, Class 1) | |
| COM1 | | 2-wire RS-485 | |
| COM2 | | 5-wire RS-232 | 3-wire RS-232 |
| COM3 | | – | 3-wire RS-232 |
| Self-Tuner | | Yes, automatic RS-485 direction control | |
| UART | | 16C550 or compatible | |
| **COM Port Format** | | | |
| Baud Rate | | 115200 bps Max. | |
| Data Bit | | 5, 6, 7, 8 | |
| Parity | | None, Odd, Even, Mark, Space | |
| Stop Bit | | 1, 2 | |
| Connector | | 10-Pin Removable Terminal Block x 1 | |
| **Power** | | | |
| Power Input | PoE | IEEE 802.3af, Class 1 | |
| | DC Jack | +12 ~ 48 VDC | |
| Power Consumption | | 0.05 A @ 24 VDC | |
| **Mechanical** | | | |
| Casing | | Plastic | |
| Flammability | | Fire-Retardant Materials (UL94-V0 Level) | |
| Dimensions | | 52 mm x 27 mm x 95 mm (W x L x H) | |
| Installation | | DIN-Rail Mounting | |
| **Environment** | | | |
| Operating Temperature | | -25 °C ~ +75 °C | |
| Storage Temperature | | -30 °C ~ +80 °C | |
| Humidity | | 0 ~ 90% RH, non-condensing | |

Note:
5-Wire RS-232: RxD, TxD, CTS, RTS, GND (Non-isolated)
3-Wire RS-232: RxD, TxD, GND (Non-isolated)
2-Wire RS-485: DATA+, DATA-, GND (Non-isolated)

## Dimensions (Units: mm)




## Ordering Information

| | |
|---|---|
| tM-7521 CR | Tiny Addressable (1x RS-232) to RS-485 Converter with PoE (RoHS) |
| tM-7522 CR | Tiny Addressable (2x RS-232) to RS-485 Converter with PoE (RoHS) |
| Includes CA-002 Cable | |

## Accessories

| | |
|---|---|
| CA-002 CR | DC jack to 2-wire Power Cable (RoHS) |
| NS-205 CR | Unmanaged 5-port Industrial 10/100 Mbps Ethernet Switch (RoHS) |
| NS-205PSE CR | Unmanaged 5-port 10/100 Mbps PoE (PSE) Ethernet Switch (RoHS) |
| UP0061D-12PA58G CR | Wall mount power supply; Input range 90-240 VAC; Output 12 VDC/0.5 A, 6 W; two pins USA plug (RoHS) |



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