



# Tiny Addressable Serial Converter



**Available soon**  
**tM-752N Series**  
Tiny Addressable Serial Converter

## Features

- Integrates any RS-232/485 serial device
- Contains a high-performance 32-bit MCU
- 10/100 Base-TX Ethernet, RJ-45 x1 (Auto-negotiating, auto MDI/MDIX, LED Indicators)
- Includes redundant power inputs: PoE and DC jack
- Provides automatic RS-485 direction control
- Includes a UDP responder for device discovery
- Supports easy firmware updates via the Ethernet
- Contains a tiny web server for configuration
- Terminal block connector for easy wiring
- Tiny form-factor and low power consumption
- RoHS compliant & no Halogen
- Made from fire retardant materials (UL94-V0 Level)
- Cost-effective with a low channel count



## 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. Consequently, it is not a good idea to use multiple serial cards to connect all these RS-232 devices together. 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.

### Easy Configuration (DCON & Web)

The tM-752N series supports the DCON protocol (compatible with I-752N series), 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 to 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.

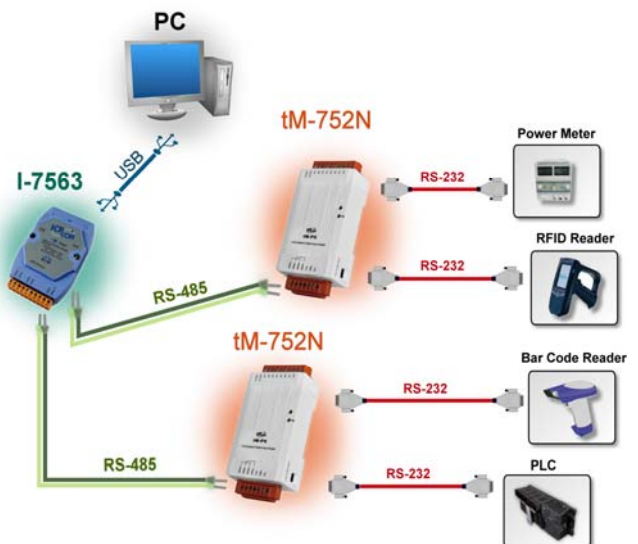
### Addressable RS-232 to RS-485 Converter

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

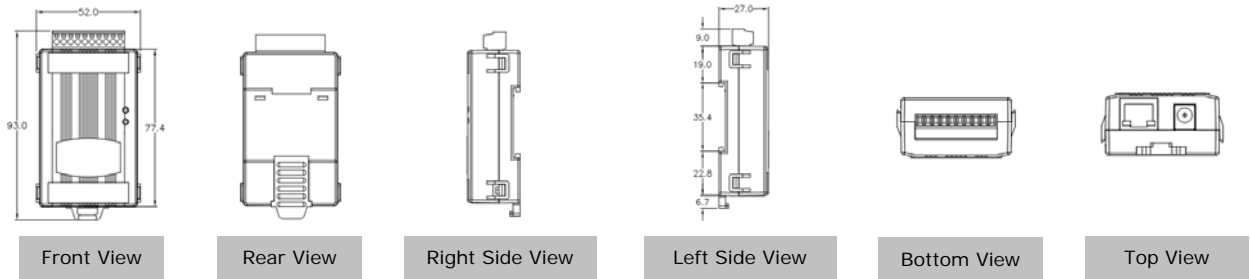
- Factory, Building and Home Automation



## Specifications

Model	tM-7521	tM-7522
<b>System</b>		
CPU	32-bit MCU	
<b>Communication Interface</b>		
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	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	
<b>COM Port Format</b>		
Baud Rate	115200 bps Max.	
Data Bit	5, 6, 7, 8	
Parity	None, Odd, Even, Mark, Space	
Stop Bit	1, 2	
<b>General</b>		
Power Input	PoE: IEEE 802.3af, Class 1 DC jack: +12 ~ 48 V <sub>DC</sub>	
Power Consumption	0.05 A @ 24 V <sub>DC</sub>	
Connector	10-Pin Removable Terminal Block x 1	
Mounting	DIN-Rail	
Flammability	Fire-Retardant Materials (UL94-V0 Level)	
Operating Temperature	-25° ~ 75°C	
Storage Temperature	-30° ~ 80°C	
Humidity	10 ~ 90% RH, non-condensing	
Notes: 5-Wire RS-232: Rx/D, Tx/D, CTS, RTS, GND (Non-isolated) 3-Wire RS-232: Rx/D, Tx/D, GND (Non-isolated) 2-Wire RS-485: DATA+, DATA-, GND (Non-isolated)		

## Dimensions (Unit: mm)



## Ordering Information

<b>tM-7521 CR</b>	Tiny addressable serial converter, PoE and 1 RS-232 Port and 1 RS-485 Port (RoHS)
<b>tM-7522 CR</b>	Tiny addressable serial converter, PoE and 2 RS-232 Ports and 1 RS-485 Port (RoHS)

## Accessories

<b>CA-0915</b>	Male DB-9 to Female DB-9 Cable, 1.5 m
<b>CA-0910F</b>	Female DB-9 to Female DB-9 Cable, 1.0 m
<b>CA-0910N</b>	DB-9 Female-Female 3-wire Null Modem Cable, 1M
<b>CA-PC09F</b>	DB-9 Female connector with plastic cover
<b>NS-205 CR</b>	Unmanaged 5-Port Industrial Ethernet Switch (RoHS)
<b>NS-205PSE CR</b>	Unmanaged Ethernet Switch with 4 PoE Ports and 1 RJ-45 Uplink (RoHS)



CA-0915



CA-0910F



CA-0910N



CA-PC09F



NS-205 CR



NS-205PSE CR