



## RS-232/RS-485

### Features

- Incorporate Serial Devices in an Ethernet network
- Virtual COM on Windows NT 4.0, 2000/XP/2003 and Vista32
- Powerful Programmable Device Server
- Watchdog Timer suitable for use in harsh environments
- Power Reverse Polarity Protection
- Serial Port +/- 4 kV ESD Protection Circuit
- Self-Tuner ASIC Controller on the RS-485 Port
- 5-digit LED Display (for versions with a display)
- RoHS Compliant with no Halogen
- Built-in High Performance MiniOS7 from ICP DAS
- 10/100 Base-TX Ethernet, RJ-45 Port (Auto-negotiating, auto MDI/MDI-X, LED indicator)
- PPDS-782(D)-MTCP supports Modbus/TCP and Modbus/RTU
- PPDS-782(D)-MTCP supports PoE (IEEE 802.3af, Class 1)
- Low power consumption
- Palm-Sized with multiple Serial Ports
- Made from fire retardant materials (UL94-V0 Level)



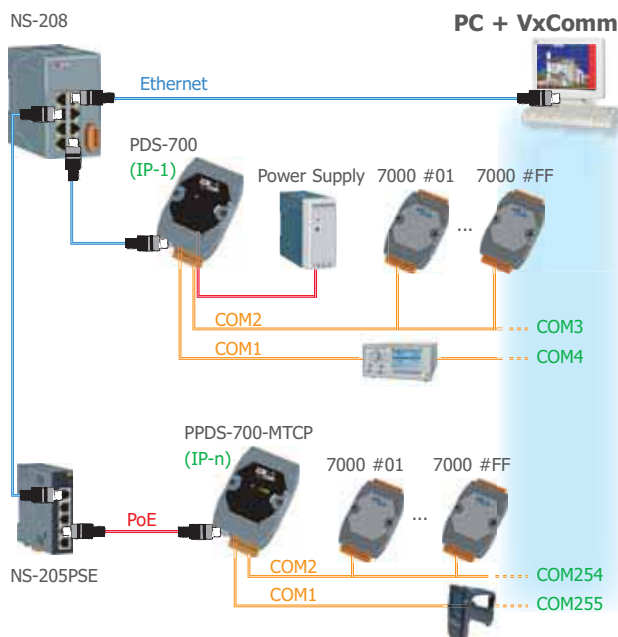
### Introduction

The PDS-700 series is a family of Programmable Device Servers, also known as "Serial-to-Ethernet gateway", that are designed for linking RS-232/422/485 devices to an Ethernet network. The user-friendly VxComm Driver/Utility allows users to easily turn the built-in COM ports of the PDS-700 series into standard COM ports on a PC. By virtue of its protocol independence, a small-core OS and high flexibility, the PDS-700 series is able to meet the demands of every network-enabled application.

The PDS-700 series includes a powerful and reliable Xserver programming structure that allows you to design your robust Ethernet applications in one day. The built-in, high-performance MiniOS7 boots the PDS-700 up in just one second and gives you fastest responses.

The PPDS-700-MTCP series features true IEEE 802.3af-compliant (classification, Class 1) Power over Ethernet (PoE) using a standard category 5 Ethernet cable to receive power from a PoE switch like the NS-205PSE. The PPDS-700-MTCP also works as a Modbus/TCP to Modbus/RTU gateway that supports most SCADA/HMI communications based on the Modbus/TCP protocol.

The PDS-782(D) and PPDS-782(D)-MTCP is equipped with 7 RS-232 ports and 1 RS-485 port. The removable on-board terminal block connector is designed for easy and robust wiring in industrial situations.



### Applications

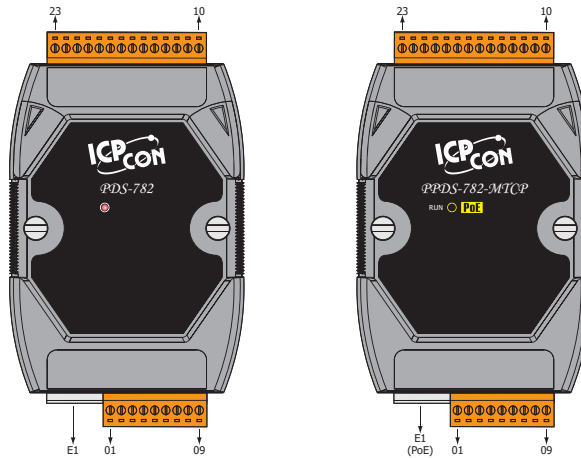
Factory, Building and Home Automation

### System Specifications

Models	PDS-782	PDS-782D	PPDS-782-MTCP	PPDS-782D-MTCP
<b>CPU</b>				
CPU	80186, 80 MHz or compatible			
SRAM	512 KB			
Flash Memory	Flash ROM: 512 KB; Erase unit is one sector (64 KB); 100,000 erase/write cycles			
EEPROM	16 KB; Data retention: 40 years; 1,000,000 erase/write cycles			
Built-in Watchdog Timer	Yes			
<b>Communication Interface</b>				
Non-isolated	COM1	RS-232 (TxD, RxD, RTS, CTS, GND)		
	COM2	RS-485 (D2+, D2-, GND)		
	COM3	RS-232 (TxD, RxD, GND)		
	COM4	RS-232 (TxD, RxD, GND)		
	COM5	RS-232 (TxD, RxD, GND)		
	COM6	RS-232 (TxD, RxD, GND)		
	COM7	RS-232 (TxD, RxD, GND)		
	COM8	RS-232 (TxD, RxD, GND)		
Ethernet	10/100 Base-TX, RJ-45 port (Auto-negotiating, auto MDI/MDI-X, LED indicator)			
PoE	-		IEEE 802.3af	
<b>COM Port Formats</b>				
Data Bit	7, 8: for COM1 and COM2			
Parity	None, Even, Odd, Mark, Space			
Stop Bit	1: for COM1 and COM2			
Baud Rate	115200 bps max.			
<b>LED Indicators</b>				
5-digit 7 Segment	-	Yes	-	Yes
System	Red			
PoE	-		Green	
<b>Power</b>				
Protection	Power Reverse Polarity Protection			
Required Supply Voltage	+10 V <sub>dc</sub> ~ +30 V <sub>dc</sub> (non-regulated)		PoE or +12 V <sub>dc</sub> ~ +48 V <sub>dc</sub> (non-regulated)	
Power Consumption	2.0 W	2.7 W	2.2 W	2.9 W
<b>Mechanical</b>				
Flammability	Fire Retardant Materials (UL94-V0 Level)			
Dimensions	72 mm x 123 mm x 35 mm (W x H x D)			
Installation	DIN-Rail or Wall mounting			
<b>Environment</b>				
Operating Temperature	-25 °C ~ +75 °C			
Storage Temperature	-40 °C ~ +80 °C			
Humidity	5 ~ 90% RH, non-condensing			

## Pin Assignments

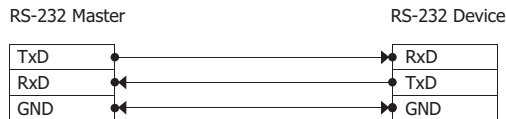
Terminal No.	Pin Assignment
E1	Link/Act
	10/100M
COM1	01 CTS1
	02 RTS1
	03 RxD1
	04 TxD1
05	INIT*
COM2	06 D2+
	07 D2-
08	(R)+Vs
09	(B)GND



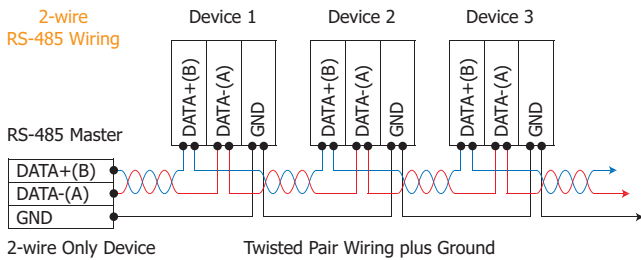
Terminal No.	Pin Assignment
COM8	23 TxD8
	22 RxD8
COM7	21 TxD7
	20 RxD7
	19 GND
COM6	18 TxD6
	17 RxD6
COM5	16 TxD5
	15 RxD5
	14 GND
COM4	13 TxD4
	12 RxD4
COM3	11 TxD3
	10 RxD3

## Wiring

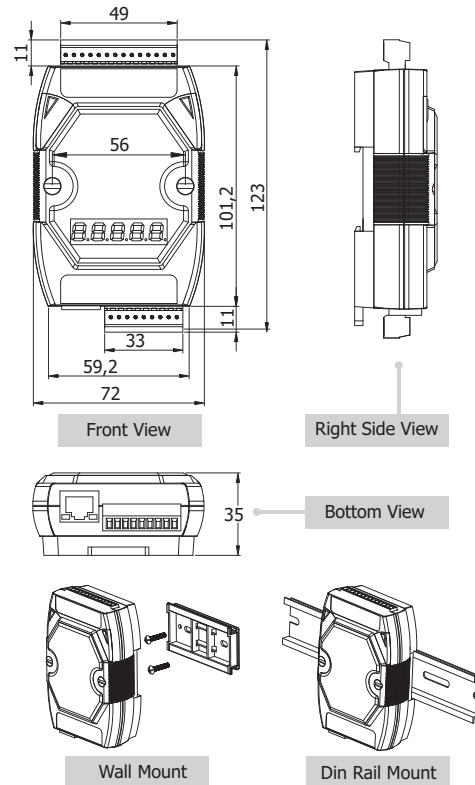
### 3-wire RS-232 Wiring



### 2-wire RS-485 Wiring



## Dimensions (Unit: mm)



## Ordering Information

Art. No. 119376	PDS-782 CR	Programmable Device Server with 7 RS-232 ports and 1 RS-485 port (RoHS) Includes One CA-0910 Cable
Art. No. 119377	PDS-782D CR	Programmable Device Server with 7 RS-232 ports, 1 RS-485 port and an LED Display (RoHS) Includes One CA-0910 Cable
Art. No. 123219	PPDS-782-MTCP CR	Programmable Device Server with PoE, Modbus/TCP, 7 RS-232 ports and 1 RS-485 port (RoHS) Includes One CA-0910 Cable
Art. No. 123257	PPDS-782D-MTCP CR	Programmable Device Server with PoE, Modbus/TCP, 7 RS-232 ports, 1 RS-485 port and an LED Display (RoHS) Includes One CA-0910 Cable

## Accessories

GPSU06U-6	24 V <sub>dc</sub> /0.25 A, 6 W Power Supply
MDR-20-24	24 V <sub>dc</sub> /1 A, 24 W Power Supply with DIN-Rail Mounting
DIN-KA52F-48	48 V <sub>dc</sub> /0.52 A, 25 W Power Supply with Din-Rail Mounting
CA-0903	9-Pin Female D-Sub and RS-232 Connector Cable, 30 cm Cable
CA-0910	9-Pin Female D-Sub and 3-wire RS-232 Cable, 1 m Cable
NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch (RoHS)
NS-205PSE CR	Unmanaged Ethernet Switch with 4 PoE Ports and 1 RJ-45 Uplink (RoHS)
DN-09-2	I/O Connector Block with DIN-Rail Mounting and Two 9-Pin Male Header. Includes CA-0915 x 2 (9-Pin Male-Female D-Sub Cable 1.5 m)
DN-09-2F	I/O Connector Block with DIN-Rail Mounting and Two 9-Pin Male Header. Includes CA-0910F x 2 (9-Pin Female-Female D-Sub Cable 1.0 m)