



## PDS-720(D) PPDS-720(D)-MTCP

Programmable (1x RS-232 and 1x RS-485)  
Serial-to-Ethernet Device Server

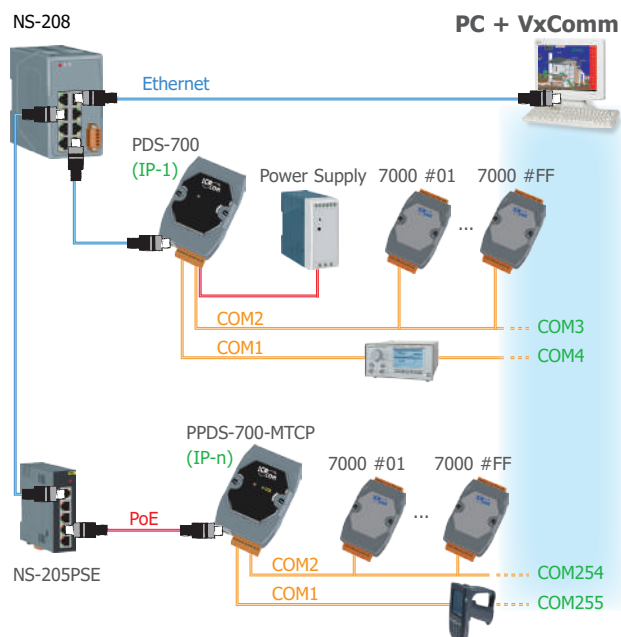
### Introduction

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 response. It also works as a Modbus TCP to RTU/ASCII gateway that supports most SCADA/HMI communications based on the Modbus/TCP protocol.

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 PDS-720(D) and PPDS-720(D)-MTCP is equipped with 1 RS-232 port and 1 RS-485 port. The removable on-board terminal block connector is designed for easy and robust wiring in industrial situations.



### Features

- Incorporate Serial Devices in an Ethernet network
- "Virtual COM" Extend COM Ports
- Virtual COM supports 32-bit and 64-bit Windows 7 SP1/10/2012/2016
- Supports Modbus TCP to RTU/ASCII Gateway
- Powerful Programmable Device Server
- Watchdog Timer suitable for use in harsh environments
- Serial Port +/- 4 kV ESD Protection Circuit
- Self-Tuner ASIC Controller on the RS-485 Port
- Built-in High Performance MiniOS7 from ICP DAS
- Palm-Sized with multiple Serial Ports



### System Specifications

Models	PDS-720	PDS-720D	PPDS-720-MTCP	PPDS-720D-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)		
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 Vdc ~ +30 Vdc (non-regulated)		PoE or +12 Vdc ~ +48 Vdc (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 35 mm x 112 mm (W x L x H)			
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			

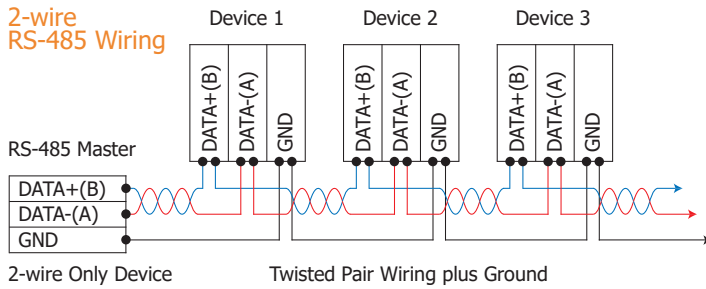
## Pin Assignments

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

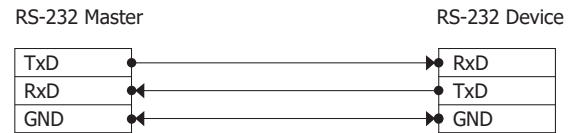


## Wiring

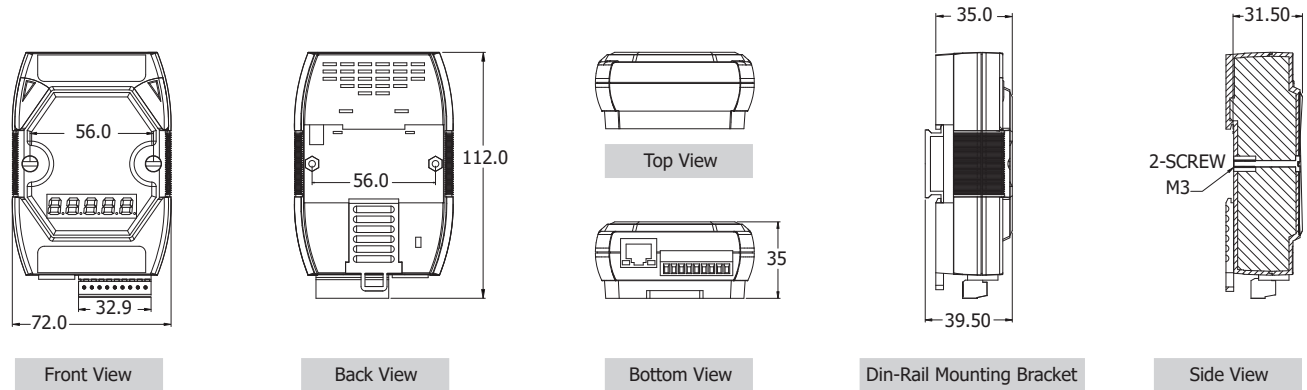
### 2-wire RS-485 Wiring



### 3-wire RS-232 Wiring



## Dimensions (Units: mm)



## Ordering Information

PDS-720 CR	Programmable (1x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server (RoHS) Includes CA-0910 Cable
PDS-720D CR	Programmable (1x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server with LED Display (RoHS) Includes CA-0910 Cable
PPDS-720-MTCP CR	Programmable (1x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server with PoE and Modbus Gateway (RoHS) Includes CA-0910 Cable
PPDS-720D-MTCP CR	Programmable (1x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server with PoE, Modbus Gateway and LED Display (RoHS) Includes CA-0910 Cable

## Accessories

CA-0903 CR	DB9 Female to 5-wire Cable [RS-232], 30cm (RoHS)
NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch (RoHS)
NS-205PSE CR	Unmanaged 5-port 10/100 Mbps PoE (PSE) Ethernet Switch (RoHS)