



## PDS(M)-752(D) PPDS(M)-752(D)-MTCP

Programmable (4x RS-232 and 1x RS-485)  
Serial-to-Ethernet Device Server

### 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
- 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
- Built-in High Performance MiniOS7 from ICP DAS
- 5-digit LED Display (for versions with a display)
- Supports Modbus TCP to RTU/ASCII Gateway
- Supports PoE (IEEE 802.3af, Class 1) [PPDS(M)-752(D)-MTCP only]
- 10/100 Base-TX Ethernet, RJ-45 Port (Auto-negotiating, auto MDI/MDI-X, LED indicator)
- Palm-Sized with multiple Serial Ports
- PDSM/PPDSM is the Metal Case
- Low power consumption



### 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.

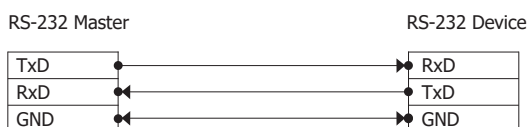
The PDS-700 series includes a powerful and reliable Xserver programming structure that allows you to design your robust Ethernet applications in one day. The built-in, high-performance MiniOS7 boots the PDS-700 up in just one second and gives you fastest responses. It also works as a Modbus TCP to RTU/ASCII 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 PDSM-700 is the PDS-700 with Metal Case (RoHS) and the PPDSM-700-MTCP is the PPDS-700-MTCP with Metal Case (RoHS). Metal Case version includes stronger protection than PDS-700 and PPDS-700-MTCP.

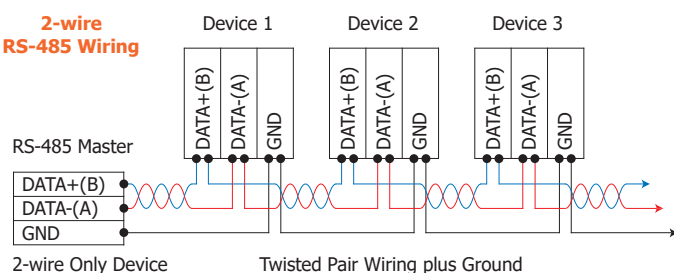
The PDS(M)-752(D) and PPDS(M)-752(D)-MTCP is equipped with 4 RS-232 ports and 1 RS-485 port. The removable on-board terminal block connector is designed for easy and robust wiring in industrial situations.

### Wiring

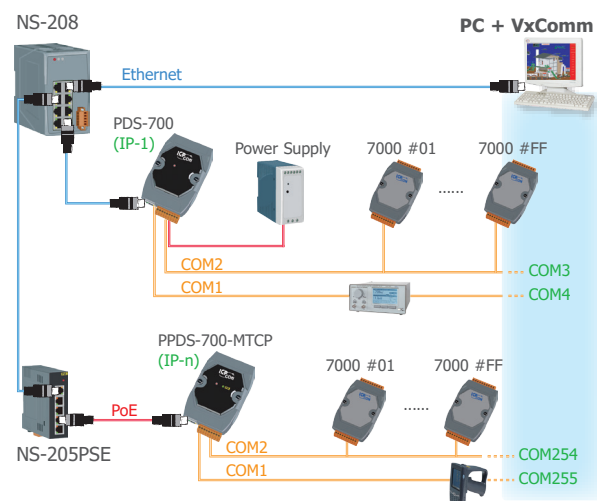
#### 3-wire RS-232 Wiring



#### 2-wire RS-485 Wiring



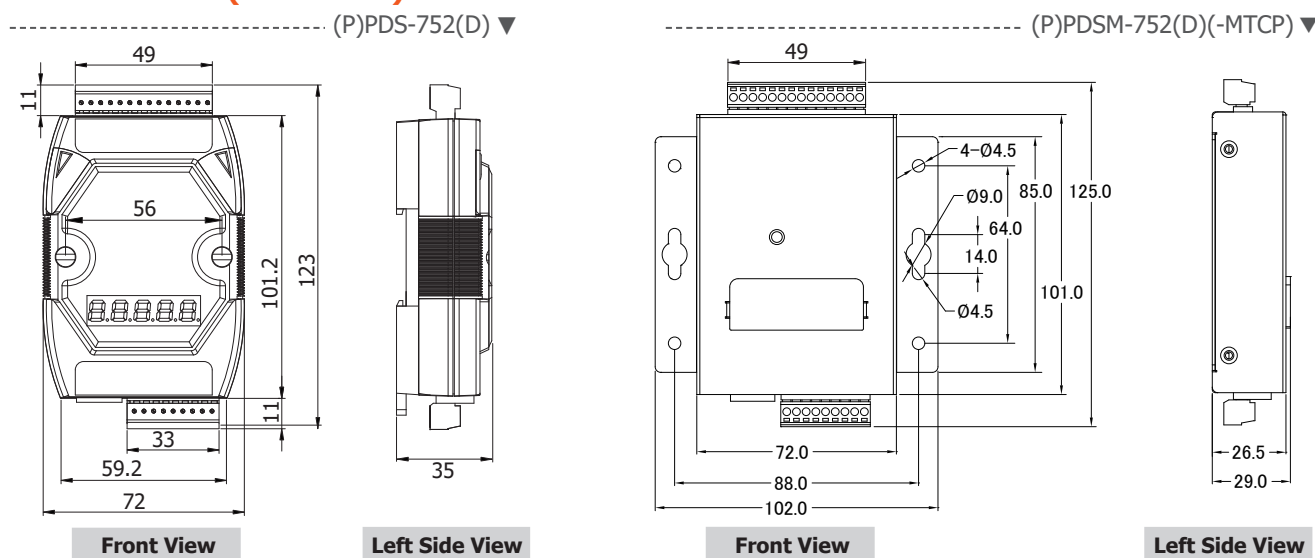
### Applications



## System Specifications

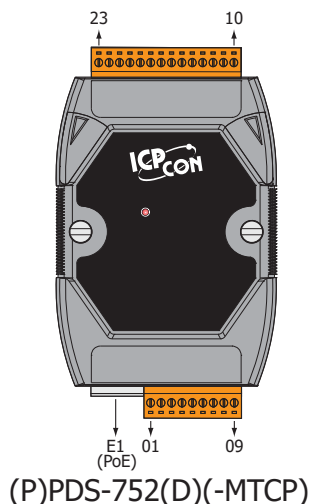
Models		PDS-752 PDSM-752	PDS-752D PDSM-752D	PPDS-752-MTCP PPDSM-752-MTCP	PPDS-752D-MTCP PPDSM-752D-MTCP
CPU					
CPU		80186, 80 MHz or compatible			
SRAM		512 KB			
Flash Memory		Flash ROM: 512 KB; Erase unit is one sector (64 KB); 100,000 erase/write cycles			
EEPROM		16 KB; Data retention: 40 years; 1,000,000 erase/write cycles			
Built-in Watchdog Timer		Yes			
Communication Interface					
Non-isolated	COM1	RS-232 (TxD, RxD, RTS, CTS, GND)			
	COM2	RS-485 (D2+, D2-, GND)			
	COM3	RS-232 (TxD, RxD, RTS, CTS, GND)			
	COM4	RS-232 (TxD, RxD, RTS, CTS, GND)			
	COM5	RS-232 (TxD, RxD, RTS, CTS, GND)			
Ethernet		10/100 Base-TX, RJ-45 port (Auto-negotiating, auto MDI/MDI-X, LED indicator)			
PoE		-		IEEE 802.3af	
COM Port Formats					
Data Bit		7, 8: for COM1 and COM2 · 5, 6, 7, 8: for COM3 and COM5			
Parity		None, Even, Odd, Mark, Space None parity is required when using 8 data bits and 2 stop bits on COM1/COM2.			
Stop Bit		1, 2: for COM1 ~ COM5			
Baud Rate		115200 bps max.			
LED Indicators					
5-digit 7 Segment		-	Yes	-	Yes
System		Red			
PoE		-		Green	
Power					
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
Mechanical					
Flammability		Fire Retardant Materials (UL94-V0 Level)			
Dimensions (W x H x D)		(P)PDS: 72 mm x 123 mm x 35 mm · (P)PDSM: 102 mm x 125mm x 29 mm			
Installation		DIN-Rail or Wall mounting			
Casing		Metal for PDSM/PPDSM · Plastic for other			
Environment					
Operating Temperature		-25 °C ~ +75 °C			
Storage Temperature		-40 °C ~ +80 °C			
Humidity		5 ~ 90% RH, non-condensing			

## Dimensions (Units: mm)

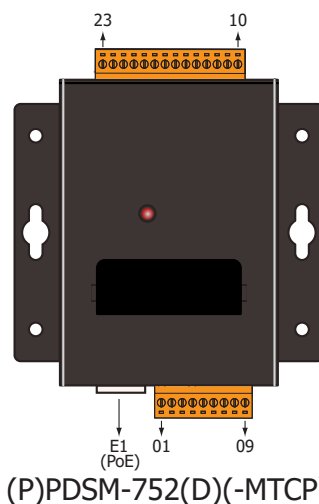


## Pin Assignments

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



(P)PDS-752(D)(-MTCP)



(P)PDSM-752(D)(-MTCP)

Terminal No.	Pin Assignment
COM5	23 RxD5 22 TxD5 21 RTS5 20 CTS5 19 GND
COM4	18 RxD4 17 TxD4 16 RTS4 15 CTS4 14 GND
COM3	13 RxD3 12 TxD3 11 RTS3 10 CTS3

## Ordering Information

PDS-752 CR	Programmable (4x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server (RoHS) Includes CA-0910 Cable
PDS-752D CR	Programmable (4x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server and LED Display (RoHS) Includes CA-0910 Cable
PPDS-752-MTCP CR	Programmable (4x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server, PoE and Modbus Gateway (RoHS) Includes CA-0910 Cable
PPDS-752D-MTCP CR	Programmable (4x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server, PoE, Modbus Gateway and LED Display (RoHS) Includes CA-0910 Cable
PDSM-752 CR	Programmable (4x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server (Metal Case) (RoHS) Includes CA-0910 Cable
PDSM-752D CR	Programmable (4x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server and LED Display (Metal Case) (RoHS) Includes CA-0910 Cable
PPDSM-752-MTCP CR	Programmable (4x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server, PoE and Modbus Gateway (Metal Case) (RoHS) Includes CA-0910 Cable
PPDSM-752D-MTCP CR	Programmable (4x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server, PoE, Modbus Gateway and LED Display (Metal Case) (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)