



PDS(M)-742(D) PPDS(M)-742(D)-MTCP

Programmable (3x 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
- Serial Port +/- 4 kV ESD Protection Circuit
- Self-Tuner ASIC Controller on the RS-485 Port
- Built-in High Performance MiniOS7 from ICP DAS
- Supports Modbus TCP to RTU/ASCII Gateway
- Palm-Sized with multiple Serial Ports



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.

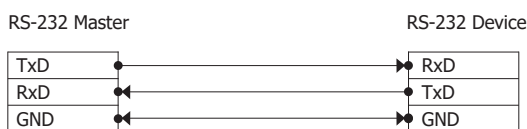
The PDS-700 series includes a powerful and reliable Xserver programming structure that allows you to design your robust Ethernet applications in one day. The built-in, high-performance MiniOS7 boots the PDS-700 up in just one second and gives you fastest responses. It also works as a Modbus TCP to RTU/ASCII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

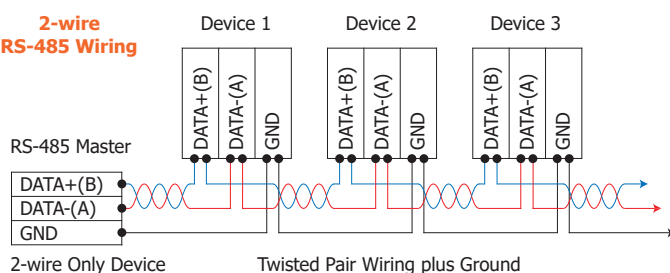
The PDS(M)-742(D) and PPDS(M)-742(D)-MTCP is equipped with 3 RS-232 ports and 1 RS-485 port. The removable on-board terminal block connector is designed for easy and robust wiring in industrial situations.

Wiring

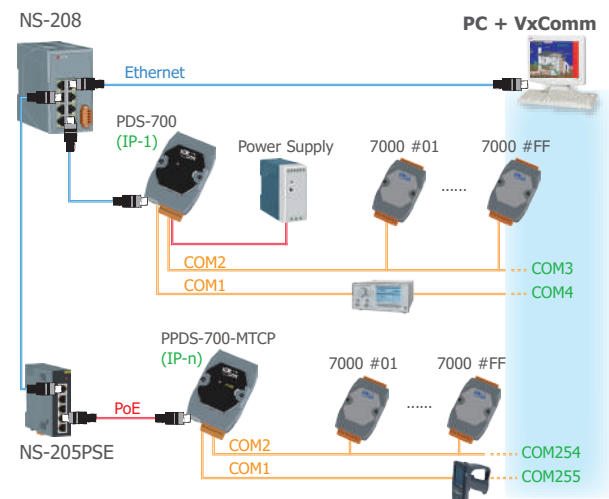
3-wire RS-232 Wiring



2-wire RS-485 Wiring



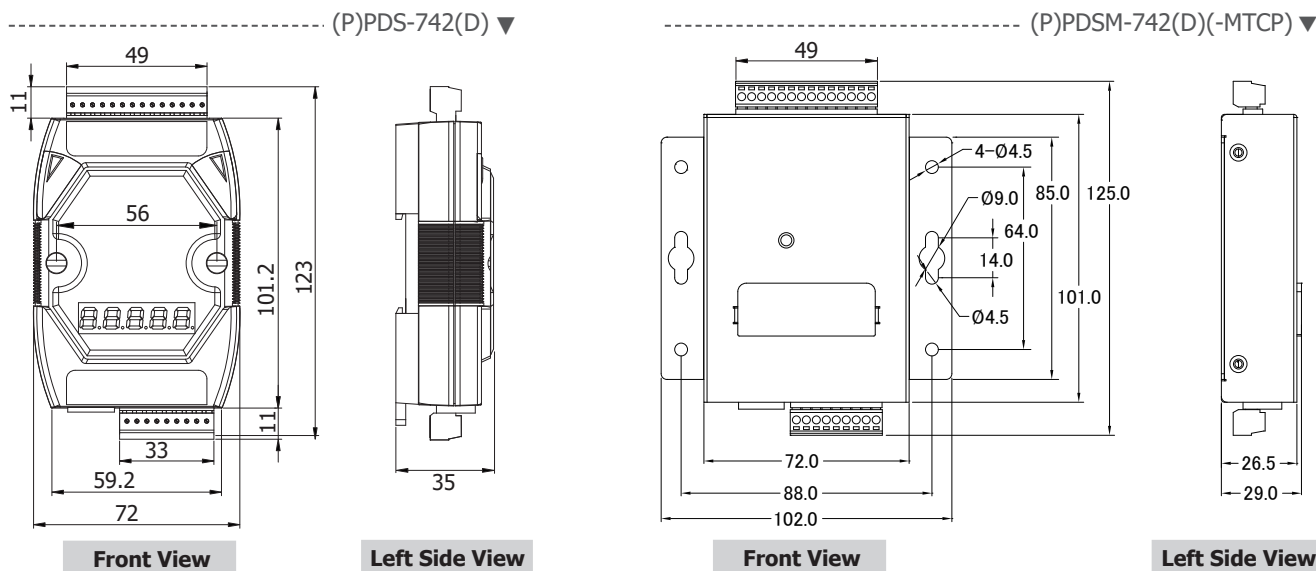
Applications



System Specifications

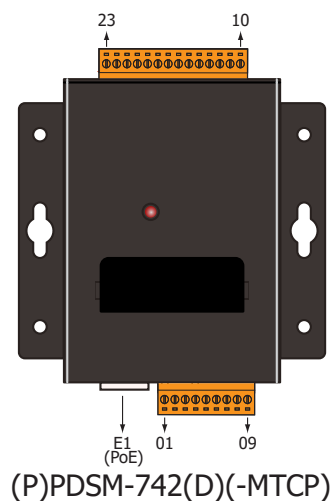
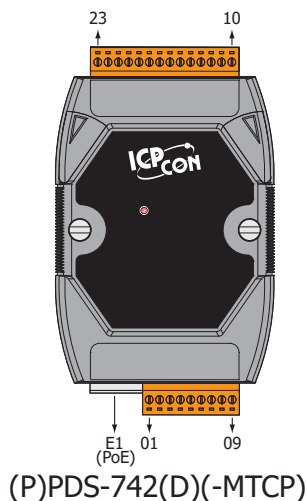
Models	PDS-742 PDSM-742	PDS-742D PDSM-742D	PPDS-742-MTCP PPDSM-742-MTCP	PPDS-742D-MTCP PPDSM-742D-MTCP
CPU				
CPU	80186, 80 MHz or compatible			
SRAM	512 KB			
Flash Memory	Flash ROM: 512 KB; Erase unit is one sector (64 KB); 100,000 erase/write cycles			
EEPROM	16 KB; Data retention: 40 years; 1,000,000 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, DSR, DTR, DCD, RI)		
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 COM4			
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 ~ COM4			
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		PoE or +12 Vdc ~ +48 Vdc	
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 L x H)	(P)PDS: 72 mm x 35 mm x 123 mm · (P)PDSM: 102 mm x 29 mm x 125 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



Terminal No.	Pin Assignment
COM4	23 RI4
	22 DCD4
	21 DTR4
	20 DSR4
	19 CTS4
	18 RTS4
	17 TxD4
	16 RxD4
	15 GND4
	14 GND3
COM3	13 RxD3
	12 TxD3
	11 RTS3
	10 CTS3

Ordering Information

PDS-742 CR	Programmable (3x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server (RoHS) Includes CA-0910 Cable
PDS-742D CR	Programmable (3x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server and LED Display (RoHS) Includes CA-0910 Cable
PPDS-742-MTCP CR	Programmable (3x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server, PoE and Modbus Gateway (RoHS) Includes CA-0910 Cable
PPDS-742D-MTCP CR	Programmable (3x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server, PoE, Modbus Gateway and LED Display (RoHS) Includes CA-0910 Cable
PDSM-742 CR	Programmable (3x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server (Metal Case) (RoHS) Includes CA-0910 Cable
PDSM-742D CR	Programmable (3x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server and LED Display (Metal Case) (RoHS) Includes CA-0910 Cable
PPDSM-742-MTCP CR	Programmable (3x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server, PoE and Modbus Gateway (Metal Case) (RoHS) Includes CA-0910 Cable
PPDSM-742D-MTCP CR	Programmable (3x 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)