ICP DAS

PDS-782-25/D6
PDS-782D-25/D6

Programmable (7x 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
- ■ Palm-Sized with multiple Serial Ports
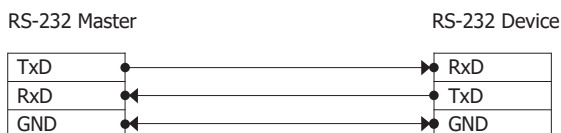
CE UKCA FC RoHS ⌧

▪ 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.
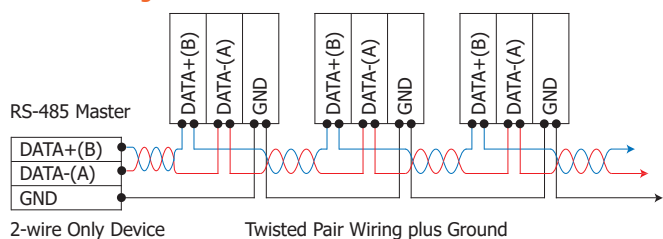
PDS-782(D)-25/D6 is equipped with 7 RS-232 ports and 1 RS-485 port. The CA-9-2505D cable converts the DB-25 connector of PDS-782(D)-25/D6 to 6 Male DB-9 connectors for easy wiring with serial devices that have female DB-9 connectors.
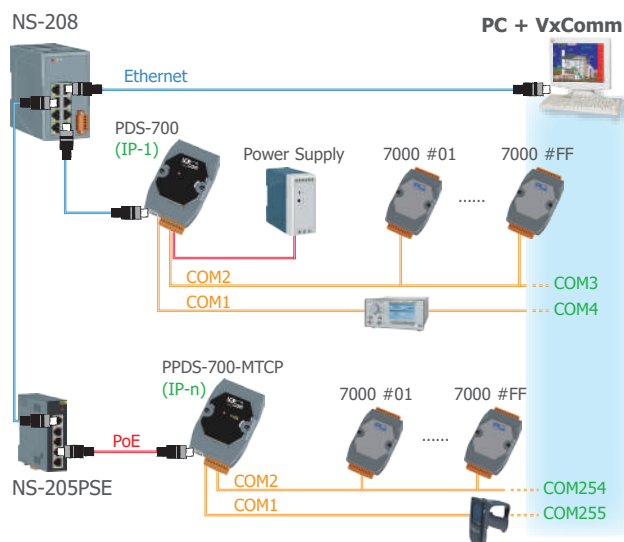
▪ Wiring

3-wire RS-232 Wiring

RS-232 Master	RS-232 Device
TxD	RxD
RxD	TxD
GND	GND

2-wire RS-485 Wiring

Device 1 — DATA+(B) DATA-(A) GND
Device 2 — DATA+(B) DATA-(A) GND
Device 3 — DATA+(B) DATA-(A) GND

RS-485 Master
DATA+(B)
DATA-(A)
GND

2-wire Only Device   Twisted Pair Wiring plus Ground

▪ Applications

NS-208
Ethernet
PC + VxComm

PDS-700 (IP-1)
Power Supply
7000 #01 ...... 7000 #FF
COM2
COM1
COM3
COM4

PPDS-700-MTCP (IP-n)
PoE
7000 #01 ...... 7000 #FF
COM2
COM1
COM254
COM255

NS-205PSE

■ System Specifications

Models	PDS-782-25/D6	PDS-782D-25/D6
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, 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)	
COM Port Formats		
Data Bit	7, 8: for COM1 and COM2，5, 6, 7, 8: for COM3 and COM8	
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 ~ COM8	
Baud Rate	115200 bps max.	
LED Indicators		
5-digit 7 Segment	-	Yes
System	Red	
Power		
Protection	Power Reverse Polarity Protection	
Required Supply Voltage	+10 V_{DC} ~ +30 V_{DC}	
Power Consumption	2.0 W	2.7 W
Mechanical		
Flammability	Fire Retardant Materials (UL94-V0 Level)	
Dimensions (W x L x H)	72 mm x 35 mm x 116 mm	
Installation	DIN-Rail or Wall mounting	
Casing	Plastic	
Environment		
Operating Temperature	-25 °C ~ +75 °C	
Storage Temperature	-40 °C ~ +80 °C	
Humidity	5 ~ 90% RH, non-condensing	

■ Dimensions (Units: mm)

| Front View | Back View | Din-Rail | Top View | Bottom View |
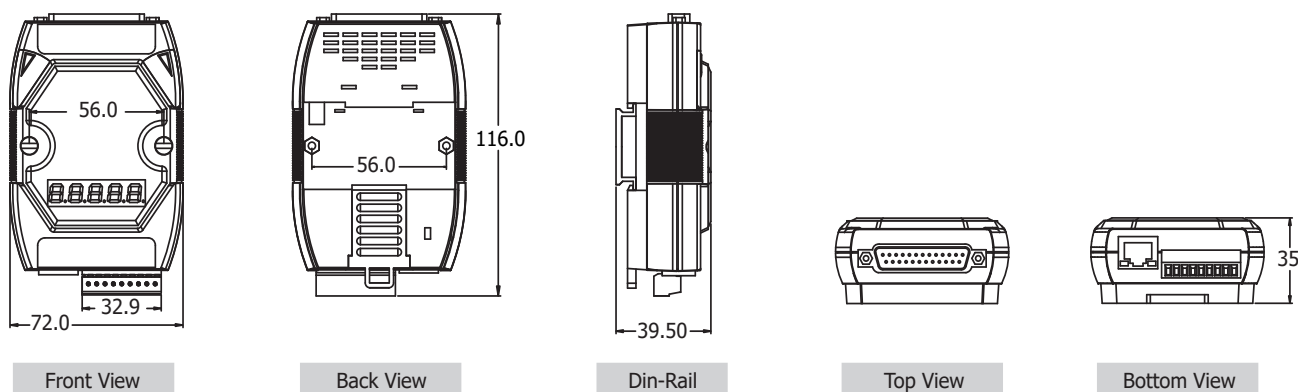
Pin Assignments

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

COM3~COM8(RS-232)

E1   01   09

Pin Assignment	Terminal No.	Pin Assignment
N/A	01	14 COM8_RxD
N/A	02	15 COM8_TxD
COM8_GND	03	16 COM7_RxD
N/A	04	17 COM7_TxD
COM7_GND	05	18 COM6_RxD
N/A	06	19 COM6_TxD
COM6_GND	07	20 COM5_RxD
N/A	08	21 COM5_TxD
COM5_GND	09	22 COM4_RxD
N/A	10	23 COM4_TxD
COM4_GND	11	24 COM3_RxD
N/A	12	25 COM3_TxD
COM3_GND	13	Shield F.G.

25-Pin Male D-Sub Connector

Pin Assignment	Terminal	No.	Pin Assignment
GND	05	09	--
--	04	08	--
TxD	03	07	--
RxD	02	06	--
--	01		

RS-232 Female DB-25 to Male DB-9 Connector

Ordering Information

PDS-782-25/D6 CR	Programmable (7x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server (RoHS) Includes CA-0910 Cable and CA-9-2505D Cable
PDS-782D-25/D6 CR	Programmable (7x RS-232 and 1x RS-485) Serial-to-Ethernet Device Server with LED Display (RoHS) Includes CA-0910 Cable and CA-9-2505D 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)
DN-09-2 CR	Two Male DB9 to Screw Terminal Board (Pitch= 5.08 mm) with DIN-rail Mounting (RoHS) Includes: CA-0915 x 2 (DB9(Male) to DB9(Female) Cable [RS-232; Pin1-Pin9], 1.5M)
DN-09-2F CR	Two Male DB9 to Screw Terminal Board (Pitch= 5.08 mm) with DIN-rail Mounting (RoHS) Includes: CA-0910F x 2 (DB9(Female) to DB9(Female) Cable [RS-232; Pin1-Pin9], 1M)