3-4 IP67 Programmable Serial-to-Ethernet Device Server

PPDS-741-IP67(/DIN) Available soon

PPDS-742-IP67(/DIN) NEW

PPDS-743-IP67(/DIN) Available soon

Programmable Device Server with 4 RS-232 or RS-485 ports, PoE and IP67 Casing

Features

- Incorporate Serial Devices in an Ethernet network
- Virtual COM for 32/64-bit Windows XP/2003/Vista/7/8/10
- Watchdog Timer suitable for use in harsh environments
- 10/100 Base-TX, RJ-45 Port (Auto-negotiating, auto MDI/MDI-X, LED indicator)
- Built-in High Performance MiniOS7 from ICP DAS
- Self-Tuner ASIC Controller on the RS-485 Port
- Powerful Programmable Device Server
- Rugged RJ-45 Connector for anti-vibration and shock
- Plastic Casing with IP67 Waterproof
- Power Reverse Polarity Protection
- RoHS Compliant & no Halogen
- Serial Port +/-4 kV ESD Protection Circuit
- Low power consumption
- Supports PoE (IEEE 802.3af, Class 1)
- ODM Service is available

Introduction

The PPDS-700-IP67 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 PPDS-700-IP67 series into standard COM ports on a PC. By virtue of its protocol independence, a small-core OS and high flexibility, the PPDS-700-IP67 series is able to meet the demands of every network-enabled application.

The PPDS-700-IP67 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 PPDS-700-IP67 up in just one second and gives you fastest responses.

The PPDS-700-IP67 is a special design for the toughest applications. It can be directly mounted to any machine or convenient flat surface. The rugged packaging and IP67 connectors are rated to protect against water, oil, dust, vibration, and much more.

The PPDS-700-IP67 supports PoE (Power over Ethernet) function that allows power and data to be carried over a single Ethernet cable, so a device can operate solely from the power it receives through the data cable. This innovation allows greater flexibility in office design, higher efficiency in systems design, and faster turnaround time in set-up and implementation. When there is no PoE switch on site, the PPDS-700-IP67 accepts power input from a +12 V_{DC} ~ +48 V_{DC} adapter.

When using PoE devices such as the PPDS-700-MTCP, PPDS-700-IP67 and PET-7000 (Ethernet I/O module with PoE), you can select the ICP DAS "PoE" switch – "NS-205PSE" – as the power source. The NS-205PSE automatically detects whether the connected devices are PoE devices or not. This mechanism ensures that the NS-205PSE will work with both PoE and non-PoE devices simultaneously.

As a power source for PoE devices, the NS-205PSE requires a power input ranging from +46 V_{DC} ~ +55 V_{DC}.

Applications

- Factory Automation
- Transportation Automation
- Chemical Industry Automation
- Marine Automation

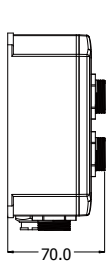
System Specifications

Models		PPDS-741-IP67(/DIN)	PPDS-742-IP67(/DIN)	PPDS-743-IP67(/DIN)
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		
Watchdog Timer		Yes		
Communication Interface				
COM1		5-wire RS-232		
COM2		Isolated 2-wire RS-485		
COM3		Isolated 2-wire RS-485	5-wire RS-232	5-wire RS-232
COM4		Isolated 2-wire RS-485	Isolated 2-wire RS-485	5-wire RS-232
RS-485	Bias Resistor	Yes, 1 KΩ		
	Node	245 (max.)		
Ethernet		10/100 Base-TX, RJ-45 port (Auto-negotiating, Auto MDI/MDI-X, LED indicators), PoE (IEEE 802.3af, Class 1)		
COM Port Formats				
Data Bit		5, 6, 7, 8		
Parity		None, Even, Odd, Mark, Space		
Stop Bit		1, 2		
Baud Rate		115200 bps max.		
LED Indicators				
System		Red: Sys, PoE		
Ethernet		Green:10/100M (E1) , Orange: Link/Act (E1)		
COM1 ~ COM4		Green: RxD, Orange: TxD		
Power				
Protection		Power input reverse polarity protection		
Required Supply Voltage		+12 VDC ~ +48 VDC (non-regulated) or PoE (IEEE 802.3af, Class 1)		
Power Consumption		2.2 W		
Mechanical				
Flammability		Fire-Retardant Materials (UL94-V0 Level)		
Casing		Plastic casing with IP67 waterproof protection		
Dimensions (W x H x D)		85 mm x 76 mm x 137 mm (89 mm x 90 mm x 138 mm for /DIN versions)		
Installation		Wall mounting (DIN-Rail mounting for /DIN versions)		
Environment				
Operating Temperature		-10 °C ~ +60 °C		
Storage Temperature		-10 °C ~ +60 °C		
Humidity		100% RH for operating temperature -10 °C ~ +60 °C		

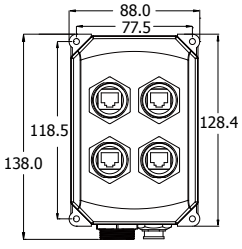
Note:
5-wire RS-232: TxD, RxD, CTS, RTS, GND
Isolated 2-wire RS-485: DATA+, DATA-, GND; Self-Tuner Inside; 2500 V_{rms} Isolation

Dimensions (Unit: mm)

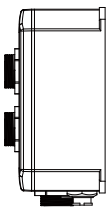
PPDS-741-IP67/PPDS-742-IP67/PPDS-743-IP67



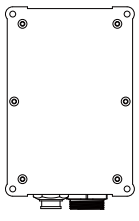
Left Side View



Front View

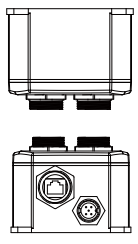


Right Side View



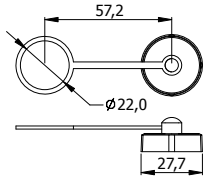
Rear View

Top View



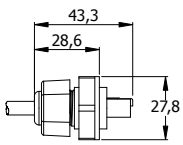
Bottom View

IP67 Ethernet Cap with Tether



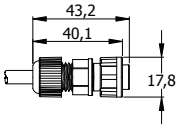
IP67 Ethernet Plug

Cable Dia:
Max. 7.0 mm
Min. 5.5 mm



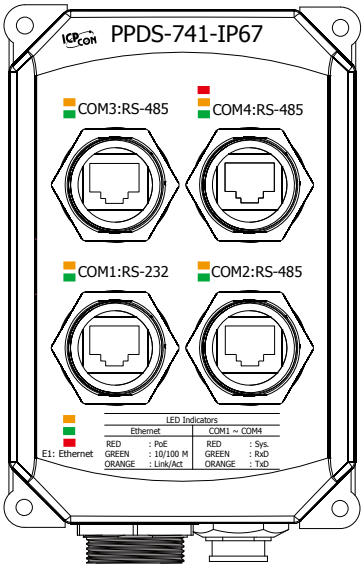
IP67 PWR Plug

Cable Dia:
Max. 6.5 mm
Min. 5.0 mm

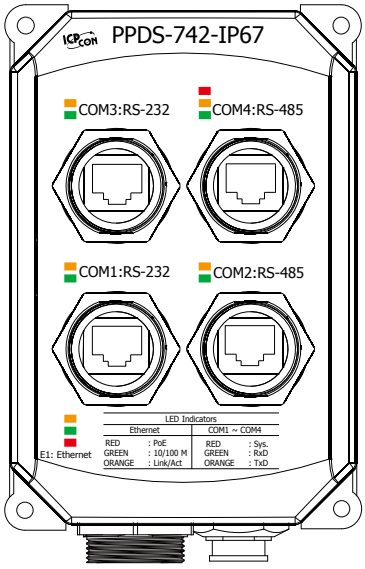


Pin Assignments

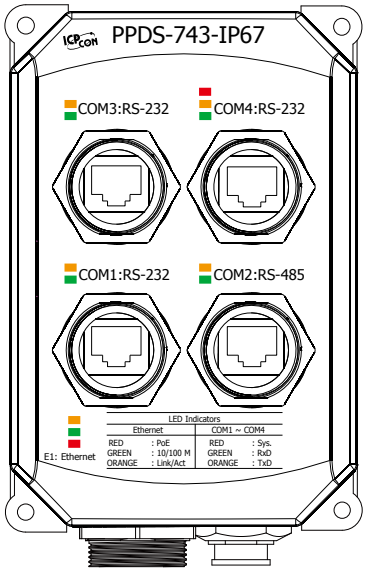
PPDS-741-IP67



PPDS-742-IP67



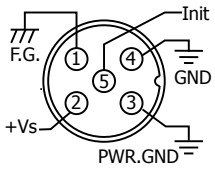
PPDS-743-IP67



COM1 ~ COM4

Pin	5-wire RS-232	2-wire RS-485
1	--	--
2	RTS	--
3	GND	GND
4	TxD	--
5	RxD	DATA+
6	--	DATA-
7	CTS	--

DC +12 ~ +48 V_{DC}



Pin	Name
1	F.G.
2	+Vs
3	PWR.GND
4	GND
5	Init

LED Indicators

System	Red	Sys.
Ethernet	Red	PoE (E1)
	Green	10/100M (E1)
	Orange	Link/Act (E1)
COM1 ~ COM4	Green	RxD
	Orange	TxD

Ordering Information

PPDS-741-IP67 CR	Programmable Device Server with 1 RS-232 port, 3 RS-485 ports, PoE and IP67 Casing (RoHS)
PPDS-741-IP67/DIN CR	Programmable Device Server with 1 RS-232 port, 3 RS-485 ports, PoE, IP67 Casing and DIN-Rail Mounting (RoHS)
PPDS-742-IP67 CR	Programmable Device Server with 2 RS-232 ports, 2 RS-485 ports, PoE and IP67 Casing (RoHS)
PPDS-742-IP67/DIN CR	Programmable Device Server with 2 RS-232 ports, 2 RS-485 ports, PoE, IP67 Casing and DIN-Rail Mounting (RoHS)
PPDS-743-IP67 CR	Programmable Device Server with 3 RS-232 ports, 1 RS-485 port, PoE and IP67 Casing (RoHS)
PPDS-743-IP67/DIN CR	Programmable Device Server with 3 RS-232 ports, 1 RS-485 port, PoE, IP67 Casing and DIN-Rail Mounting (RoHS)

Accessories

GPSU06U-6	24 V_{DC}/0.25 A, 6 W Power Supply
MDR-20-24	24 V_{DC}/1 A, 24 W Power Supply with DIN-Rail Mounting
DIN-KA52F-48	48 V_{DC}/0.52 A, 25 W Power Supply with DIN-Rail Mounting
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)