

# Port Powered RS-232/422 Converters

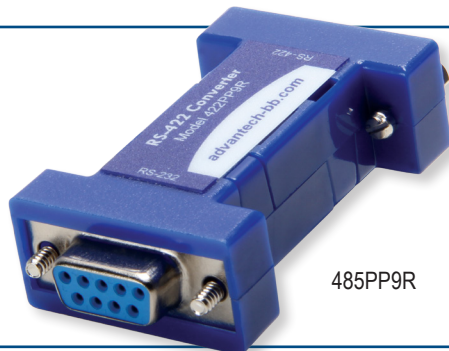
Models 422PP9R, 422PP9TB

B+B SMARTWORX

Powered by

ADVANTECH

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485PP9R

## PRODUCT FEATURES

- Extend RS-232 data signals up to 1.2 km (4,000 ft.)
- Change RS-232 TD and RD to balanced RS-422 signals
- Automatic Send Data Control - no software drivers necessary
- Baud rates up to 115.2 kbps
- Powered from RS-232 handshake lines - no power supply required

These port-powered, two-channel converters change TD and RD RS-232 lines to balanced RS-422 signals extending communication distances up to 1.2 km (4,000 ft.). Automatic Send Data Control feature enables the RS-422 driver when data is present on the RS-232 side. Control of the driver is automatic at rates up to 115.2 kbps. The RS-422 driver and receiver are always enabled.

With port-powering, a power supply is not required. Power comes from the DTR and RTS RS-232 handshake control lines. At least one handshake line must be present, in either the positive or negative voltage state. This permits use in applications without worrying about software control of the handshake lines.

If port power is not sufficient, select the 422PP9TB which can be powered from an external source. This version also allows you to connect the RS-422 signals via a terminal board instead of a DB9 connector.

Converters are configured to transmit both directions in an RS-232 and RS-422 system. RS-232 pinout connects directly to a computer's COM port or any other DTE device. Connections to the RS-422 side are made through a DB9 for the 422PP9R or terminal board for the 422PP9TB.

These converters are great for field service or "in-line" cable applications.

## ORDERING INFORMATION

MODEL NUMBER	RS-232 CONNECTOR	RS-422 CONNECTOR	OUTPUT	OPTIONAL POWER SUPPLY
422PP9R	DB9 Female	DB9 Female	RS-422	
422PP9TB	DB9 Female	Terminal Block	RS-422	✓

## ACCESSORIES

SMI6-12-V-ST - 12VDC, 6W Power Supply, Stripped/Tinned, International AC Input (optional for 422PP9TB only)

9PAMF6 - DB9 male to DB9 female adapter cable, 1.8 m (6 ft.)

## Why use an "optional" power supply with a port-powered converter?

Simply put, all RS-232 ports are not created equal. Many laptop PC's, for example, deliberately reduce power to the RS-232 port to save the battery. And, if you are working at the distance limits of RS-422 or 485, you might need an extra boost. For the majority of applications though, the converter's port powering is sufficient to accomplish the task.

## Automatic Send Data Control Explained

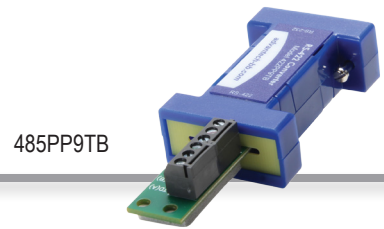
As operating systems become more complex, it is increasingly difficult to control an RS-485 driver with standard software and the RTS line. This is especially true in Windows and multi-tasking operating systems. With Advantech B+B SmartWorx' Automatic Send Data Control circuit, driver control is in the converter hardware, so you do not have to work with software at all.

The circuit monitors data flow and enables the driver during transmission and automatically disables it when no data is being sent. There is no need to rework software or install new drivers. Most Advantech B+B SmartWorx RS-232 to RS-485 converters and RS-485 serial cards include Automatic Send Data Control.

All product specifications are subject to change without notice.  
422PP9R, 422PP9TB\_3116ds

# Port Powered RS-232/422 Converters

Models 422PP9R, 422PP9TB



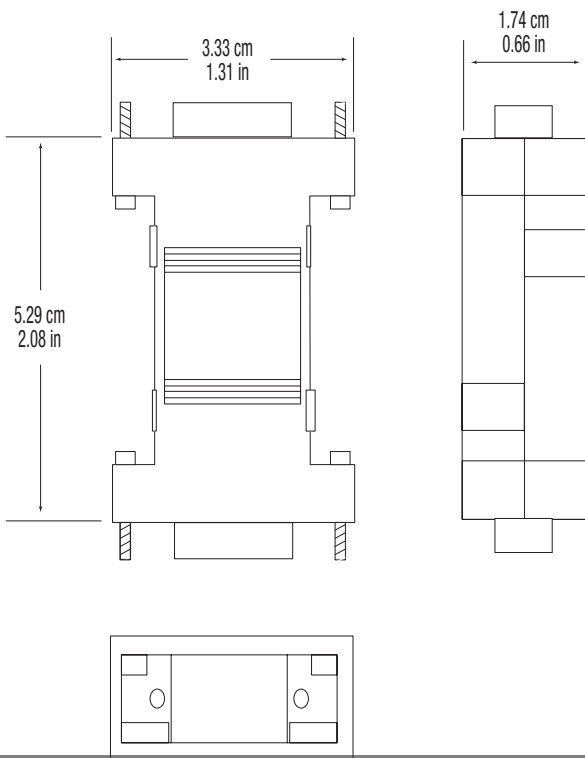
485PP9TB

## SPECIFICATIONS

SERIAL TECHNOLOGY	
Data Rate	115.2 kbps maximum
<b>RS-232</b>	
Connector	422PP9R: DB9 female 422PP9TB: DB9 female
Signals	
<b>RS-422</b>	
Connector	422PP9R: DB9 female 422PP9TB: Terminal block
Signals	
Operation	RS-422, 4-wire
Biasing Resistors	4.7k Ohms
Termination	None
POWER	
Source	Port-powered from RS-232 handshake lines. Optional, external 12-16 VDC power supply (422PP9TB Only).

MECHANICAL	
Dimensions	422PP9R: 6.1 x 3.3 x 1.7 cm (2.4 x 1.3 x 0.66 in)
Dimensions	422PP9TB: 8.9 x 3.3 x 1.7 cm (3.5 x 1.3 x 0.7 in)
Enclosure	Plastic, In-line
Weight	0.10 lbs (45.3 g)
MTBF	422PP9R: 2094328 422PP9TB: 849670
MTBF Calc. Method	MIL 217F Parts Count Reliability Prediction
ENVIRONMENTAL	
Operating Temperature	0 to +70 °C (+32 to +158 °F)
Storage Temperature	-40 to +85 °C (-40 to +185 °F)
Operating Humidity	0-95% Non-Condensing
APPROVALS / CERTIFICATIONS - 422PP9R, 422PP9TB	
2004/10//EC	Electromagnetic Compatibility Directive
2011/65/EU	Reduction of Hazardous Substances Directive
EN 55022: +AC	Information technology equipment - Class B RF Emissions
EN 55024	Information technology equipment - Immunity (Light-Industrial Environments)
EN 61000-4-2	ESD Immunity
EN 61000-4-3: +A2	Radiated Immunity
EN 61000-4-4	EFT/Burst Immunity
EN 61000-4-6	RF Conducted Immunity

## MECHANICAL DIAGRAM - 422PP9R



## MECHANICAL DIAGRAM - 422PP9TB

