Technical Insight – USBC-H-422/485-M PRO and -ISO PRO Series

Connective Peripherals are pleased to announce the launch of our new PRO Series of USB to RS422/RS485 converters, the USBC-H-422/485-M PRO and USBC-H-422/485-M-ISO PRO. We designed the PRO series from the ground up, building upon our extensive experience in USB-Serial technology. This enabled us to enhance the traditional USB-RS422/RS485 design by adding many key features and improvements. As part of the design process, we evaluated how our existing converters were used in real-life applications as well as feedback from customers who use them.

Features

Our new range of PRO converters retain the benefits of our current models…

- ✓ Renowned Hi-Speed FTDI chipset and Drivers
- ✓ Virtual COM Port Drivers for Windows, Linux, macOS and more
- ✓ Selectable to RS422 or RS485 modes
- ✓ DB9 Male and Terminal Block connections
- ✓ Robust metal enclosure with various mounting options
- ✓ Powered over USB, with no external power adapter needed
- ✓ Additional 5V Power Output for external devices

…whilst adding many more:

Configured via software over USB
No jumpers or DIP switches

Isolated and non-Isolated versions
with the same features and enclosure

Comprehensive LED Indicators
Check the configuration at a glance

USB Type C connector
Connect to modern computers without adapters

2 x RJ45 Connectors for RS485
Easily connect to RS485 networks

Accessories Included

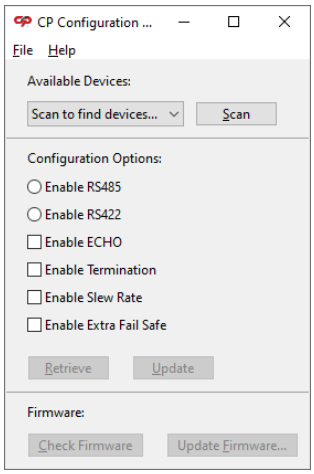
The USBC-H-422/485-M PRO and USBC-H-422/485-M-ISO PRO are supplied complete with the following accessories:

- 2m USB 2.0 cable (USB Type-A to Type-C)
- DIN Rail Bracket (for 35mm DIN Rails)
- Mounting screws x2 (M2.5 x 6mm)

Configuration without Switches and Jumpers

One key feature of the new design is the DIP-switch and Jumper-free configuration.

The FTDI chipset and drivers in our range of converters already make installation quick and simple, providing a Virtual COM Port on Windows, Linux, macOS and more. But in RS422 and RS485 converter applications, one additional and often inconvenient step is to set the serial mode and the settings such as biasing and termination. Using the wrong mode or settings can cause application issues and so users are normally required to open the case and configure small switches and jumpers whilst referring to a copy of the manual.



Our new PRO design completely avoids the need to open the case to configure or check the settings. It uses no DIP switches or jumpers. Instead, all of these settings are configured by pressing a button on the unit to set configuration mode and then using a simple and user-friendly application on Windows or Linux to select your operating mode and options. The utility can also read the settings allowing you to confirm what is currently set.

Comprehensive LED Indicators

As a companion to this configuration feature, we added a much more comprehensive set of LED indicators (10 in total) allowing all of the settings to be viewed at a glance as soon as the unit is powered up. The LEDs indicate the usual Power, Tx and Rx status available on most units. But we have added LEDs to indicate RS422/485 mode, as well as Termination on/off, Biasing on/off, RS485 Echo on/off, Slew Rate on/off and an indicator showing that the isolated power (on -ISO units) and 5V auxiliary output is on and functioning.

Isolated and Non-Isolated Versions

The PRO series also feature Isolated and Non-Isolated versions with the same features, pinout and form factor, making them easily interchangeable. The isolated version provides a protective optical barrier between the USB and RS422/RS485 interfaces. This helps avoid issues such as ground loops when connecting devices with different power supply ground potentials and helps avoid damage to the controlling computer from noise and spikes on the bus.

An isolated PRO series converter can be easily swapped in place of a non-isolated version if the application is found to need isolation. The robust enclosure with a variety of mounting options along with UKCA, FCC and CE compliance make the unit ideal for a wide range of applications.

Find Out More

With the new PRO Series, we have built upon our popular and trusted range of USB-RS422/RS485 converters and added many new features to make them even better. For more information on the new PRO range, please visit us at www.connectiveperipherals.com or contact our Sales team at sales@connectiveperipherals.com