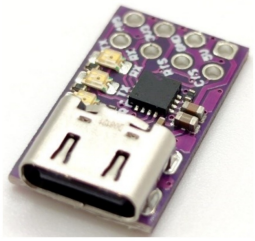

PoLabs PoUSB12C USB to UART Adapter User Manual

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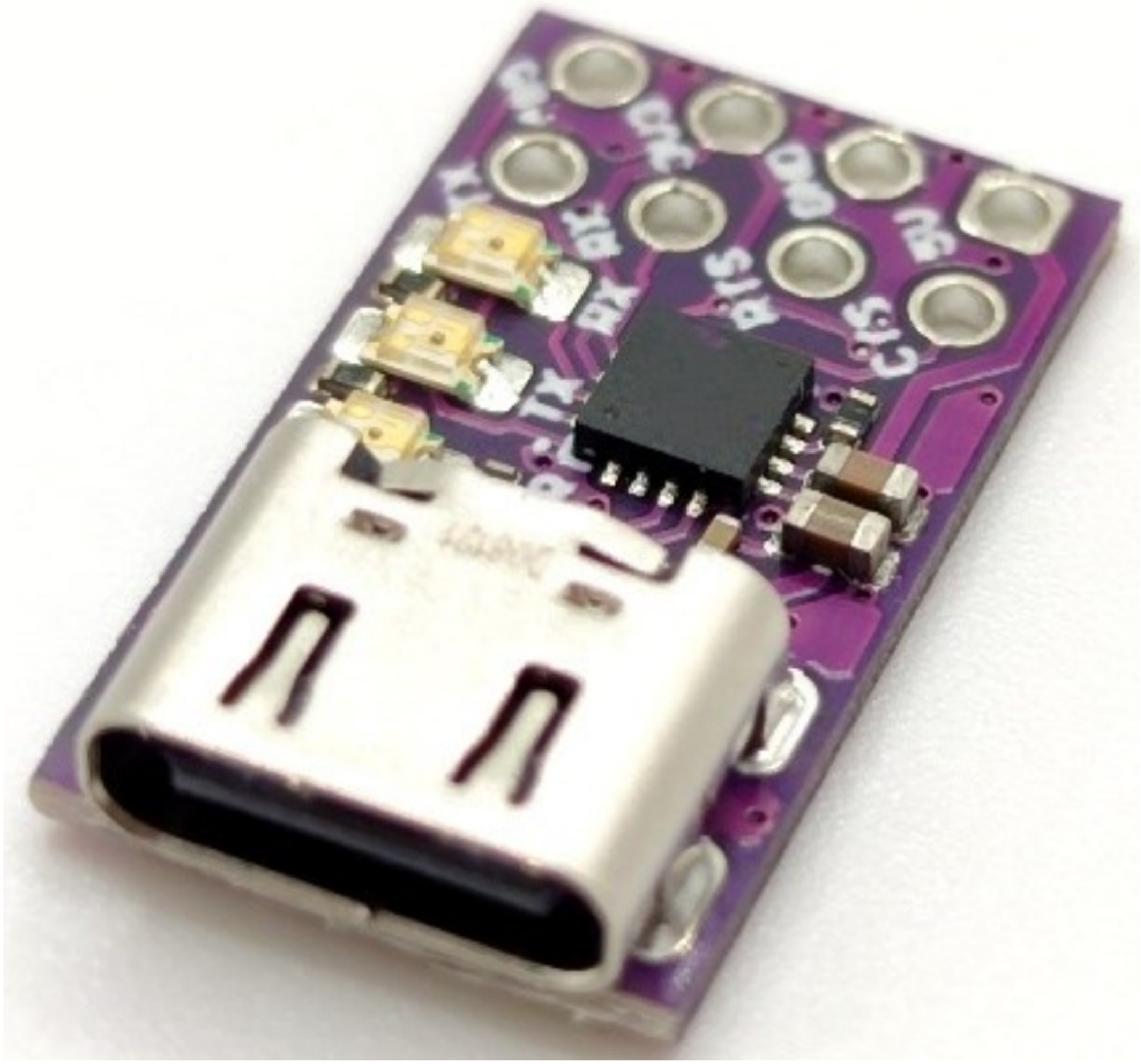
RX
TX
RTS
CTS

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Introduction

The PoUSB12C is a USB 2.0 to RS-232 (UART) bridge converter which is simple, cost effective, very small and easy to use. It uses a USB-C type connector to connect to your PC and is based on the CP2102 Bridge from Silicon Labs. It provides the user with multi baud rate serial data and access to USB control signals in a convenient 8 pin 2,54 mm (0.1") pitch package. The PoUSB12C is ideal for prototype or production.

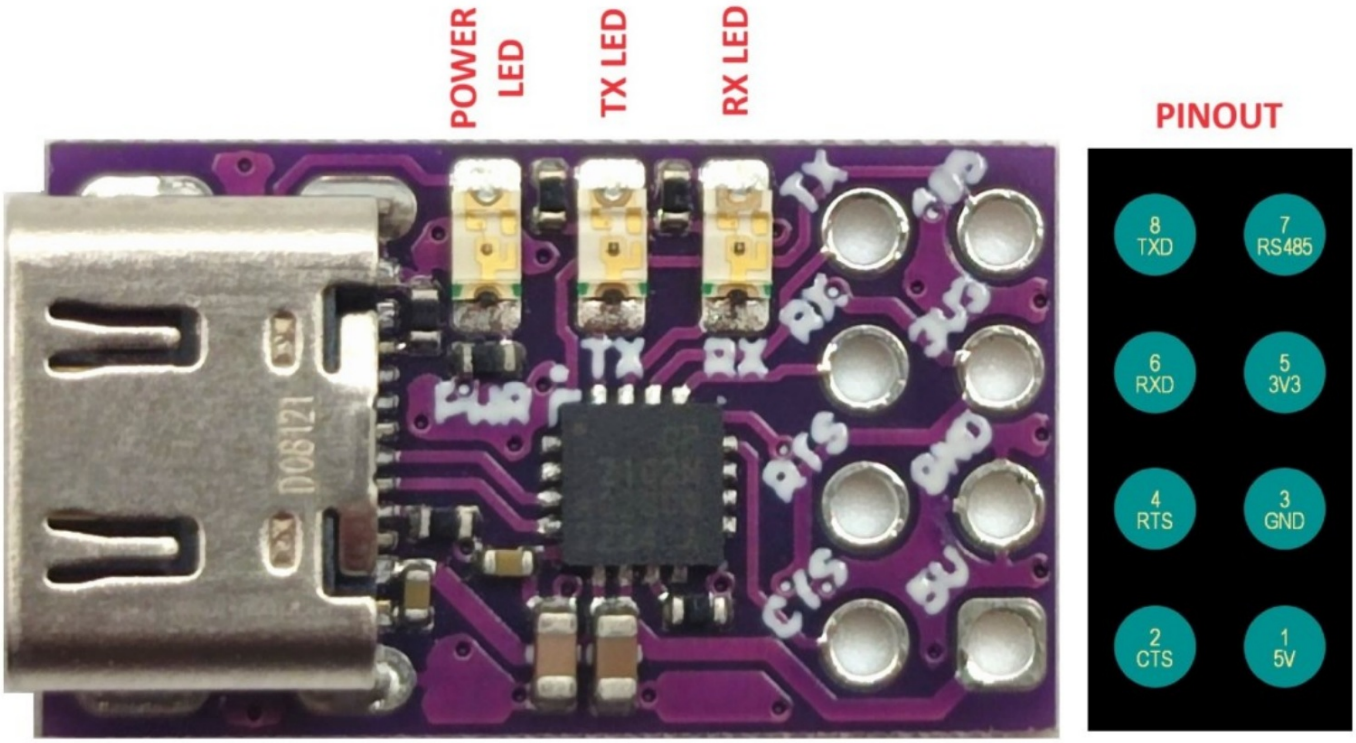
The converter automatically manages the requests from USB host and commands for controlling the UART functions which simplifies the development effort and firmware. PoUSB12C also supports the RS485 standard and

has an additional pin for transmit/receive (driver/receive enable) selection. To modify the device and its functionality Simplicity Studio software can be downloaded and used.

Main Features:

- USB 2.0 compliant full-speed device (12Mbps maximum speed).
- Xon/Xoff handshaking supported (300bps to 3Mbps).
- UART supports 5-8 bit data, 1-2 Stop bits, odd/even and no parity.
- Integrated EEPROM for Vendor ID, product ID, serial and release number.
- On-chip 3.3V regulator available with power on reset circuit.
- USB powered.
- TX and RX signal levels are between 0V and 3.3V but 5V logic compatible.
- Temperature range: -40 to +85 °C.
- Small size: 19mm x 11mm x 4mm.
- Virtual COM port drivers for Windows, Linux and MACOS.
- Simplicity Studio software for customization.

Connectors and pinout



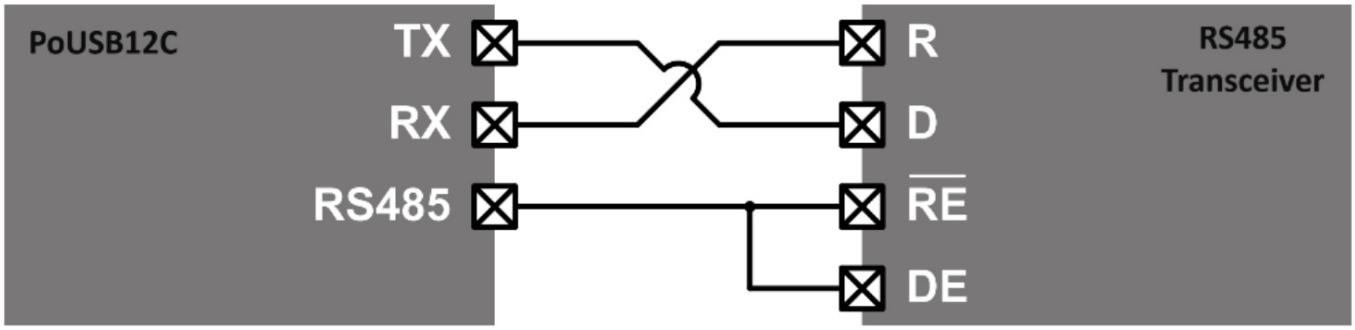
Pin description

5V	Supply pin for 5V power from USB
3V3	Regulated 3.3V power supply from IC (100mA max)
GND	Ground
TX (TXD)	Digital Output. Asynchronous data output (UART Transmit)
RX (RXD)	Digital Input. Asynchronous data input (UART Receive)
RTS	Digital Output. Ready To Send control output (active low).
CTS	Digital Input. Clear To Send control input (active low).
RS485 (485)	Digital Output. RS485 control signal.

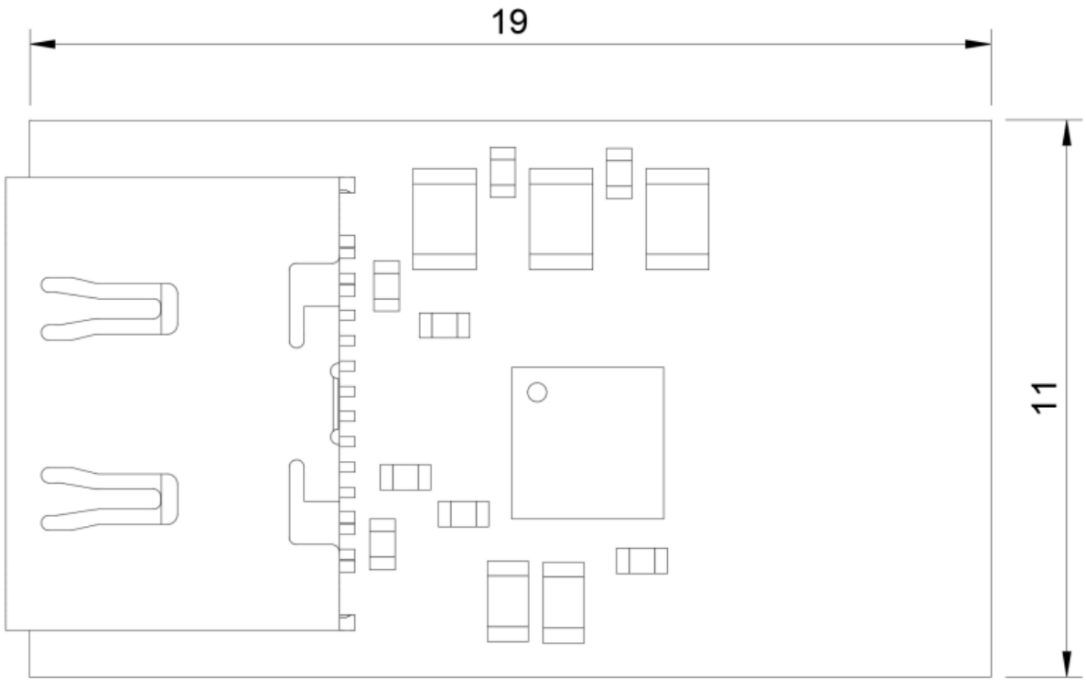
Usage examples

PoUSB12 makes USB to Serial interface very simple, so you can easily create USB to RS-232 converters, USB to RS-422/RS-485 converters, upgrade legacy RS232 devices, make PDA and cellphone USB interface cables, barcode readers, POS terminals, etc. In any application, make sure the TX and RX lines from the PoUSB12 are crossed over to the attached peripheral. That is, the TX from the PoUSB12 connects to the RX of the target and the RX from the PoUSB12 connects to the TX of the target device. Note: the TX and RX signal levels are between 0.0 Volts and 3.3 Volts and they are 5V logic compatible.

The RS485 pin is an optional control pin that can be connected to the DE and RE inputs of the transceiver. When configured for RS485 mode, the pin is asserted during UART data transmission. The RS485 pin is active-high by default and is also configurable for active low mode using Xpress Configurator.



Mechanical dimensions



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Documents / Resources

	**PoLabs PoUSB12C USB to UART Adapter** [pdf] User Manual PoUSB12C USB to UART Adapter, PoUSB12C, USB to UART Adapter, UART Adapter, Adapter

References

- PoLabs web store - Polabs
- PoLabs web store - Polabs
- Software and Tools for Developers - Silicon Labs
- User Manual