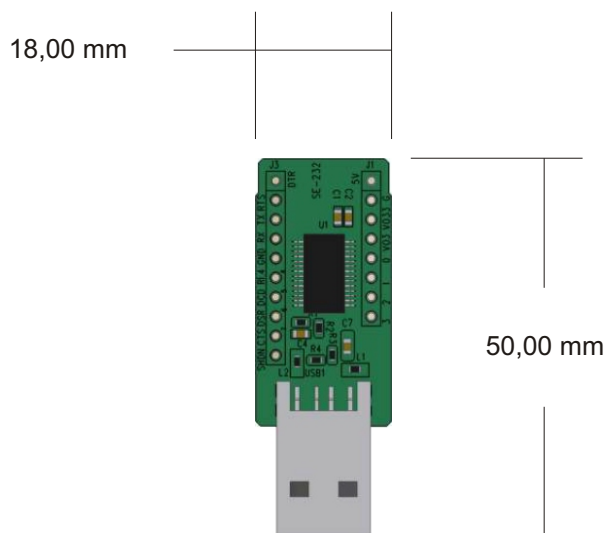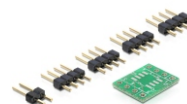# 61859

Delock industry USB to serial UART interface module
EAN: 4043619618590

18,00 mm

50,00 mm

original size

edition: 05/2011

Specification

61859

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Features

• Single chip USB-to-asynchronous serial data-transfer interface with Prolific PL-2303HXD
• Fully Compliant with USB (Full-Speed) on chip USB 1.1 transceiver, 5V→3.3V regulator
• On-chip 12MHz clock generator supports RS-422/RS-485 like serial interface (TXD, DTR_N, and RTS_N pins should be externally pulled-up to 5V) (The wiring is done via an optional board!)
• Supports RS232-like serial interface
  • Full-duplex transmitter and receiver (TXD and RXD)
  • Six MODEM control pins (RTS, CTS, DTR, DSR, DCD, and RI)
  • 5, 6, 7 or 8 data bits
  • Odd, even, mark, space, or none parity mode
  • One, one and a half, or two stop bits
  • Parity error, frame error, and serial break detection
  • Programmable baud rate from 75 bps to 6M bps
  • External Rs232 driver power down control
  • Independent power source for serial interface
• Extensive flow control mechanism
  • Adjustable high/low watermark level
  • Automatic hardware flow control with CTS/RTS(1) or DSR/DTR(2)
  • Automatic software flow control with XON/XOFF
  • Inbound data buffer overflow detection
• Configurable 512-byte bi-directional data buffer
  • 256-byte outbound buffer and 256-byte inbound buffer; or
  • 128-byte outbound buffer and 384-byte inbound buffer
• Supports remote wake-up from MODEM input signals
  • On-chip OTP (One Time Programming) ROM for startup device configurations
  • 0°C to 70°C extended operating temperature range.

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61859 typical applications:

• USB to Rs232 converters.
• Upgrading legacy peripherals to USB.
• Cellular and cordless phone USB data-transfer cables and interfaces.
• Interfacing MCU/PLD/FPGA-based designs to USB.
• USB audio and low-bandwidth video data transfer.
• PDA-to-USB data transfer.
• USB smart card readers.
• USB instrumentation.
• USB industrial control.
• USB MP3 player interface.
• USB FLASH card readers and writers.
• Set-top box PC-USB interface.
• USB hardware modems.
• USB wireless modems.
• USB bar code readers.
• USB software and hardware encryption dongles.

61859 driver support:

• Windows 98SE, ME, 2000, Server 2003, Server 2008
• Windows XP 32-bit and XP 64-bit
• Windows Vista 32-bit and Vista 64-bit
• Windows 7 32 bit and 64 bit
• Windows CE 4.2, 5.0 and 6.0 (driver custom-made in part)
• Mac OS 8/9, OS-X
• Linux 2.4.31 and greater (Chip is PL-2303HXD)

Absolute maximum ratings:

• Storage temperature 0°C to +70°C
• VCC supply voltage -0.3V to +5.5V
• DC input voltage: -0.3V to VCC + 0.3V
• On-chip regulator DC output current: 25mA

D.C. characteristics:

• VCC operating-supply voltage 4.5 - 5.5V
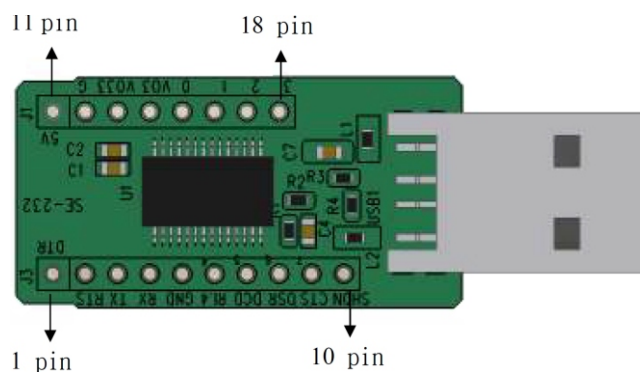• Operating supply current 20 - 25mA
• Suspend supply current 260 - 450uA

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Pinout description

1 DTR - data terminal ready control output/handshake signal
2 RTS - request to send control output/handshake signal
3 TXD - transmit asynchronous data output
4 RXD - receiving asynchronous data input
5 G - GROUND
6 RI_4 - serial port (ring indicator)
7 DCD - data carrier detect control input
8 DSR - data set ready control input/handshake signal
9 CTS - Clear To Send Control Input/Handshake Signal
10 SHDN - RS232 transceiver shut down control
11 VCC-5V - USB port VBUS, 5V power. (6.5V for OTPROM writing voltage)
12 GND - GROUND
13 VO33 - regulator power output, 3.3V
14 VO3 - Rs232 IO power Input, 3.3V

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Note: This guide requires the use of a Windows 98/2000/Vista PC that is equipped with a USB port.
1. Download the PL-2303 drivers. Unzip the drivers into a folder on the hard drive.
2. Select a power source for the 61859. The typical configuration is 5-volt from USB connector.
3. Connect the 61859 module to the host PC via a USB-A to USB-A(female) cable. This action initiates the loading of USB drivers. When prompted, select the folder where the CDM drivers were stored in Step 1.
Windows will then complete the installation of the device drivers for the 61859 module. The next time the 61859 module is attached, the host PC will immediately load the correct driver without any prompting. Reboot the PC if prompted to do so.
At this point, the 61859 is ready for use.

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You can find current product information on our homepage: www.delock.com.
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Information and data contained in this manual are subject to change without notice in advance. Errors and misprints excepted.
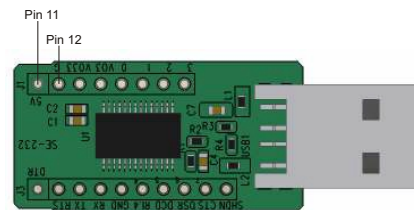
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USB Bus-Powered Configurations
Figure 1.

The figure above illustrates a typical USB bus-powered configuration. A USB bus-powered device gets its power from the USB bus. Basic rules for USB bus-powered devices are as follows:
1. On plug-in to USB, the module and external circuitry should draw no more than 100mA on the 5-volt line from the USB host.
2. In USB Suspend Mode, the module and external circuitry should draw no more than 2.5mA.
3. A design that consumes more than 100mA in total cannot be plugged into a USB bus-powered hub.
4. No USB target system can draw more than 500mA from the USB bus. The power descriptors in the internal OTP ROM of the 61859 should be programmed to match the total current drawn by the target system.
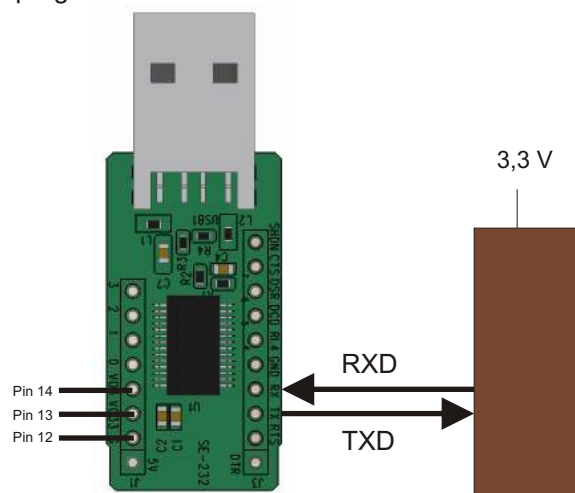

Figure 2 shows how to configure the 61859 to interface with a 3.3V logic device. Pin 14 and Pin 13 should be connected by a jumper or a zero Ohm resistor. In this example, the target electronics provide the 3.3 volts via the VO33 line (Pin 13) which, in turn, will cause the 61859 interface I/O pins to drive out at the 3.3V level.

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