# 4D SYSTEMS

µUSB MicroUSB

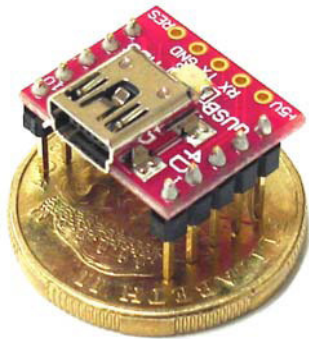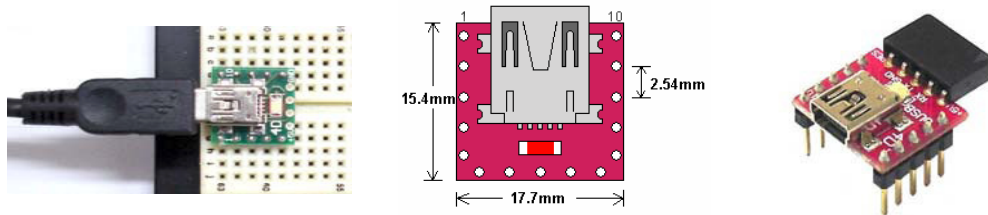| Pin | Name | Description |
|-----|------|-------------|
| 1 | DTR | Data Terminal Ready output (active low) |
| 2 | TX | Serial Data output (uUSB Transmit) |
| 3 | RX | Serial Data input (uUSB Receive) |
| 4 | RTS | Ready to Send output (active low) |
| 5 | CTS | Clear To Send input (active low) |
| 6 | GND | Ground |
| 7 | SUSPEND | USB Suspend State (active high) |
| 8 | GND | Ground |
| 9 | 5V | 5V Power from USB (upto 500mA) |
| 10 | 3.3V | 3.3V Power regulated (upto 100mA) |

**figure 1: uUSB-MB5 Pin-Out Diagram**

## Product Overview:

The microUSB (**µUSB-MB5**) is a USB to RS-232 bridge converter which is simple, cost effective, very small and easy to use. It uses a mini-B type USB 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 flow control signals in a convenient 10 pin 0.1" pitch Dual-In-Line package. The **µUSB-MB5** is ideal for prototype or production.
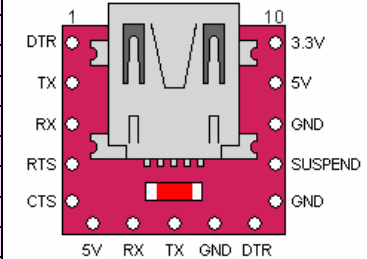
## Typical Applications:

The microUSB (**µUSB-MB5**) makes an easy USB-Serial interface, 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 µUSB are crossed over to the attached peripheral. That is, the TX from the µUSB connects to the RX of the target and the RX from the µUSB connects to the TX of the target device.

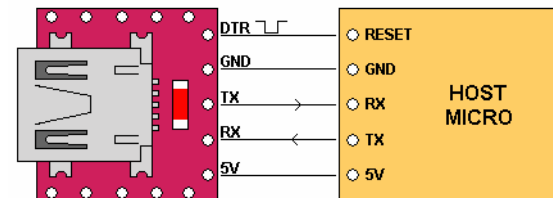**Note:** the TX and RX signal levels are between 0.0 Volts and 3.3 Volts.

15.4mm
2.54mm
17.7mm

**figure 2: typical interface with a microcontroller**

## Main Features:

- USB 2.0 compliant Full Speed 12Mbps maximum speed; Suspend supported
- Hardware or Xon/Xoff handshaking supported; 300bps to 1Mbps
- UART supports 5-8 bit data, 1-2 Stop bits, odd/even and no parity
- Integrated EEPROM for Vendor ID, product ID, serial number, release number
- On-chip 3.3V regulator available; power on reset circuit
- Virtual COM port drivers allow operation with existing COM port PC applications
- Supports Windows, MAC (OSX-9 and above) and Linux (2.4 kernel and above)
- Self powered or USB powered; -40 to +85 deg C temp range
- Small size; 15.4mm x 17.7mm (0.5" x 0.5") approx.
- Traffic/Operation LED indicates board status

## For Help and Other Information:

- Assistance with latest driver downloads go to www.silabs.com or visit the **µUSB-MB5** product web-page of your distributor.

- Questions and technical support please email support@4dsystems.com.au

**figure 3: Interface to any 4D serial device such as the uLCD-OLED and uVGA modules with the extra 5pin header provided.**