

# TTL5USB9M & TTL3USB9M

## USB to TTL Mini-Converter

- ✓ Connect 5 & 3.3V TTL Devices to your USB Port
- ✓ Perfect for Field Service Applications
- ✓ Small – Fits easily into any laptop bag
- ✓ USB Port Powered
- ✓ USB 2.0 (12 Mbps) Compatible
- ✓ TTL Data rates up to 460.8 Kbps
- ✓ Supports Windows 98, ME, 2000, XP, & Vista



Universal Serial Bus (USB) has become the connectivity workhorse of today's PCs, replacing the familiar serial ports. However, many commercial and industrial devices still use the TTL interface. To connect these devices to modern PCs, you need a simple and reliable conversion solution. The TTL5USB9M and TTL3USB9M offer this solution in a space saving, USB Port powered package. Simply plug the converter into an available USB port on your computer or USB hub and install the drivers supplied on CD ROM. The device will show up as an additional COM port in the Windows Device Manager which is fully compatible with your Windows applications. Choose the TTL5USB9M for 5V TTL and the TTL3USB9M for 3.3V TTL. Locked serial number versions are also available (see the driver installation notes at the end of this document). A one meter USB cable is included. Remember, when it comes to USB to Serial Conversion, B&B Electronics Ulinx™ brand is your number one choice.

### Specifications

| Serial Technology    |   |
|----------------------|---|
| TTL                  | TD, RD, CTS, RTS, GND                                 |
| Level                | 5V or 3.3V (See Ordering Information)                 |
| Connector            | DB9 Male  |
| Data Rate            | Up to 460.8 Kbps                                      |
| USB Technology       |   |
| Connector            | USB Type B Female                                     |
| Standard             | 2.0 (Backward Compatible)                             |
| Data Rate            | 12 Mbps   |
| Power                |   |
| Source               | USB Port  |
| Input Voltage        | 5 VDC   |
| Consumption          | ~ 0.5 W (Low power device, draws less than 100 mA)    |
| Software             |   |
| Driver CD            | Windows 98, ME, 2000, XP, Vista (x32, x64)            |
| Mechanical           |   |
| Dimensions           | 2.3 x 1.3 x .6 in (5.8 x 3.2 x 1.6 cm)                |
| Enclosure            | In-line mounted, plastic                              |
| Weight               | 0.23 lbs (104.3 g) with USB Cable                     |
| Environmental        |   |
| Operating Temp       | 32 to 158°F (0 to 70 °C)                              |
| Storage Temp         | -40 to 185 °F (-40 to 85 °C)                          |
| Op Humidity          | 0 to 95 % (Non-condensing)                            |
| MTBF                 |   |
| TTL5USB9M            | 1981564 hours   |
| TTL3USB9M            | 1981564 hours   |
| MTBF Method          | Parts Count Reliability Prediction                    |
| Regulatory           |   |
| Approvals            | FCC, CE   |
| Ordering Information |   |
| Model Number         | Description   |
| TTL5USB9M            | USB to 5V TTL Mini-Converter                          |
| TTL3USB9M            | USB to 3.3V TTL Mini-Converter                        |
| TTL5USB9M-LS         | USB to 5V TTL Mini-Converter (Locked Serial Number)   |
| TTL3USB9M-LS         | USB to 3.3V TTL Mini-converter (Locked Serial Number) |
| Accessories          |   |
| USBAMB-3F            | 3 ft (1 M) USB Cable (One Included)                   |



## Package Contents

- TTL5USB9M or TTL3USB9M to USB to TTL Mini-Converter
- 3ft (1M) USB Cable
- Datasheet
- CD with Drivers for Windows 98, ME, 2000, XP and Vista

If any item is missing or damaged, contact B&B Electronics for a replacement.

## DB9 Pin-out



RS-232 Pin-out DB9 Male DTE

| Pin | Direction | Signal Name           |
|-----|-----------|-----------------------|
| 1   | ----      | Not Used              |
| 2   | Input     | RD (Receive Data)     |
| 3   | Output    | TD (Transmit Data)    |
| 4   | ----      | Not Used              |
| 5   | N/A       | SG (Signal Ground)    |
| 6   | ----      | Not Used              |
| 7   | Output    | RTS (Request to Send) |
| 8   | Input     | CTS (Clear to Send)   |
| 9   | ----      | Not Used              |

## Driver Installation

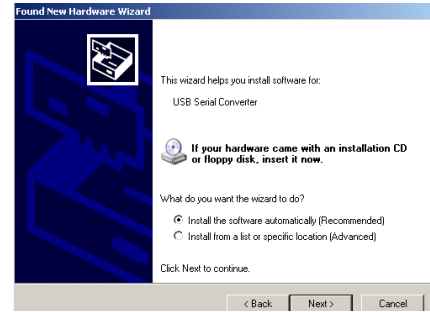
Screen shots are from Windows XP

**THE FOUND NEW HARDWARE WIZARD WILL RUN TWICE. ONCE TO INSTALL THE USB DEVICE AND ONCE TO INSTALL THE SERIAL COM PORT.**

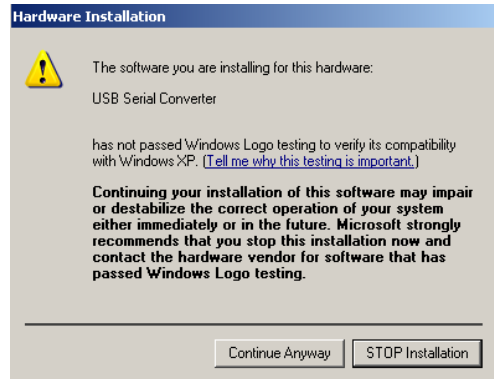
- Connect the converter to your PC's USB port with the supplied cable.
- The Found New Hardware wizard will start.
- When prompted to connect to Windows Update to search for the driver, select "No, not at this time" and click on Next >



- Select Install the software automatically and click Next>



- A warning concerning Windows logo testing will be displayed. Click on Continue Anyway >



- The Completing the Found New Hardware Wizard will be displayed. Click on Finish >

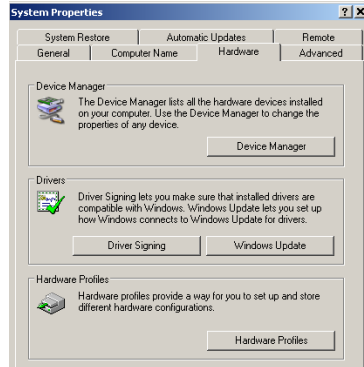
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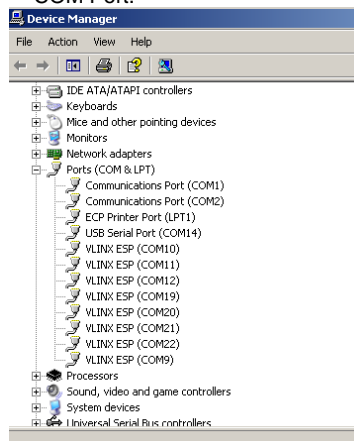
## Check Drivers

Screen shots are from Windows XP

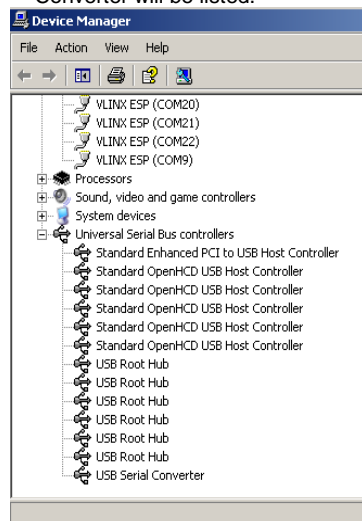
- Right click on My Computer. Select the Hardware tab.



- Expand the Ports (COM & LPT) tree. The USB Serial Port will be listed as the next available COM Port.

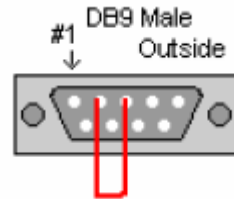


- Expand the USB Controllers tree. The USB Serial Converter will be listed.



## Loop Back Test

- Loop back pins 2 and 3 on the DB9 M connector.



- Using Hyper Terminal or similar program, connect to the appropriate COM port. Set the desired baud rate. Ensure Hyper Terminal local echo is OFF.
- Transmit data. If the same character string is returned, the test is good.
- A detailed description of this test is located in the technical notes section of our web page, [www.bb-elec.com](http://www.bb-elec.com).

## Installation Notes

- These USB to serial converters are offered as serialized (each unit has a unique electronic serial number) or with locked serial numbers (each unit has the same electronic serial number). LS models are great for applications, such as field service, in which a pool of converters are shared.
- **SERIALIZED** – Select a serialized model if the USB to serial Converter is to be assigned to a unique COM port. If you plug in a converter with a different serial number, the driver installation procedure will be initiated again. This will also allocate another COM port and USB Controller in Windows. This will happen even if the first converter is not plugged in.
- **LOCKED SERIAL NUMBER** – Select a locked serial number model (-LS suffix) if you desire different USB to serial converters of the same type to share a single COM port (one at a time). With the locked serial number models, you only need to install the driver once, provided two converters are not plugged in at the same time. The locked serial number products are intended for uses, such as field service, in which PC's and converters are mixed and matched.
- Instructions for uninstalling the driver are located on the CD ROM.