

Improving the Communication Latency (Speed)

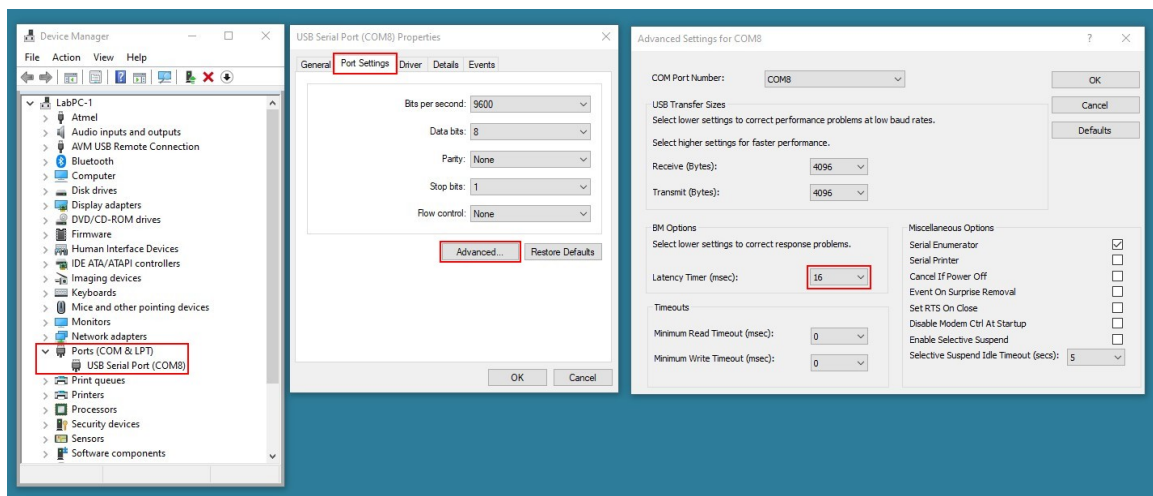
This document provides a step-by-step guide to setting the Serial Latency Timer for Stahl-Electronics Devices which use a USB Virtual Serial Port on both Windows and Linux operating systems. Follow the instructions carefully to ensure correct configuration.

Issue

The Driver for USB Virtual Serial Ports polls the device for answers in 16ms intervals, also called Latency Timer. Depending on the current state of this Latency Timer an answer to a command might be delayed by up to 16ms, independent of the time the device needs to answer itself. To reduce this Delay, the Latency Timer can be adjusted down to 1ms within the operating system

Setting the Serial Latency Timer in Windows

1. Open the Device Manager, by right-clicking on the Start menu and selecting 'Device Manager'.
2. In the Device Manager, find 'Ports (COM & LPT)' and expand it to see the connected serial device.
3. Right-click on the serial device and select 'Properties'.
4. In the Properties window, navigate to the 'Port Settings' tab and click on the 'Advanced' button.
5. In the Advanced Settings window, locate the 'Latency Timer (msec)' setting. Use the dropdown to select 1ms as latency timer value.



6. Once the value is set, click 'OK' to apply the settings.

Setting the Serial Latency Timer in Linux

1. Open a terminal window.
2. To check the current latency timer setting for the serial device, use the following command:

```
sudo cat /sys/bus/usb-serial/devices/ttyUSB0/latency_timer
```

Replace 'ttyUSB0' with the appropriate device name if necessary.

3. To set the latency timer to 1ms, use the following command:

```
sudo echo 1 > /sys/bus/usb-serial/devices/ttyUSB0/latency_timer
```

Again, replace 'ttyUSB0' with the correct device name.

4. You can verify the change by re-running the first command to check the latency timer value.
5. Note: To make this change permanent across reboots, you may need to create a udev rule or add the command to your system's startup scripts.