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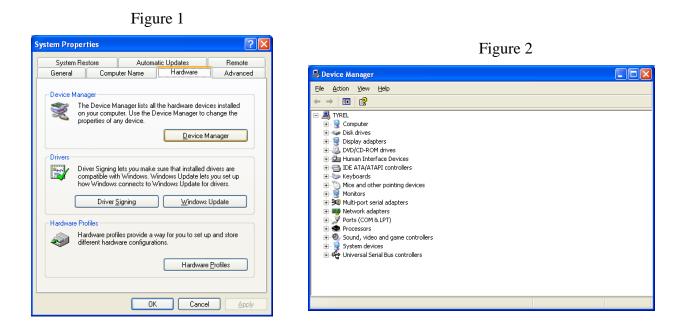
Application Note #5471 Optimizing Firmware Upgrade Speed While Using a USB-Serial Adaptor March 14,2008

Functional Description

It is possible to increase the speed of doing a firmware upgrade while using a USB to Serial adaptor. If the adaptor has an FTDI chipset (such as FreeWave model USB-RS232-6), the latency can be reduced. The following is an example of how long it takes to do a firmware upgrade with different hardware configurations: with a normal hardware serial port -45 seconds, with a USB to Serial adaptor with default settings -810 seconds, and a USB adaptor with adjusted settings -185 seconds.

Settings

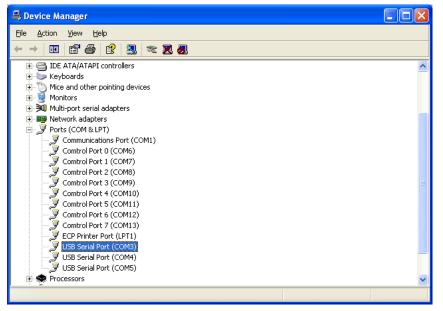
Right-Click on My Computer and select Properties. Under the Hardware tab (Figure 1), click on Device Manager (Figure 2).



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In the Ports section, select your USB port (Figure 3).

Figure 3

Right-Click and select **Properties**. On the properties window, go to the Port Settings tab and click on Advanced (Figure 4).

USB Serial Port (COM3) Prop	erties		? 🗙	
General Port Settings Driver	Details			
<u>B</u> its per	second: 9600		~	
<u>1</u>	ata bits: 8		~	
	Parity: None		~	
<u>c</u>	top bits: 1		~	
<u>F</u> low	control: None		•	
<u>A</u> dvanced <u>R</u> estore Defaults				
		ок с	ancel	

Figure 4



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In the Advanced Settings window, change the Latency Timer to 1 (Figure 5).

Advanced Settings for COM3		? 🛛			
COM Port Number: COM3 USB Transfer Sizes Select lower settings to correct performance problems at low Select higher settings for faster performance. Receive (Bytes): 4096 Transmit (Bytes): 4096	baud rates.	OK Cancel Defaults			
BM Options Select lower settings to correct response problems. Latency Timer (msec): Timeouts Minimum Read Timeout (msec): Minimum Write Timeout (msec): 0	Miscellaneous Options Serial Enumerator Image: Constraint of the serial Printer Cancel If Power Off Image: Constraint of the series Event On Surprise Removal Image: Constraint of the series Set RTS On Close Image: Constraint of the series Disable Modem Ctrl At Startup Image: Constraint of the series				
Figure 5					

Press OK. The adaptor should now be able to program a firmware upgrade at faster speeds.

Please contact FreeWave Technical support if you have any setup questions or need any assistance. (303)381-9200 or (866)923-6168 or moreinfo@freewave.com