



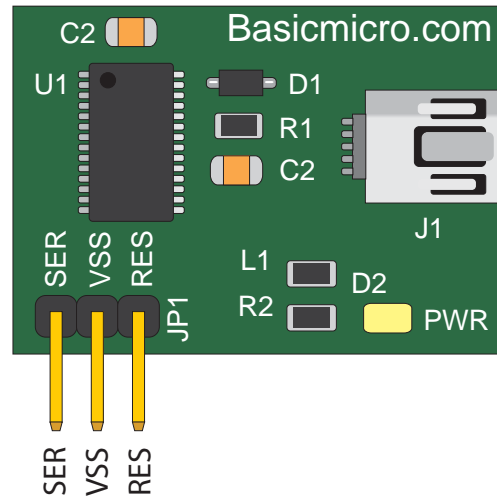
BASIC MICRO

TECHNOLOGY AT WORK

BasicATOM Nano USB2Serial
Data Sheet

Feature Overview:

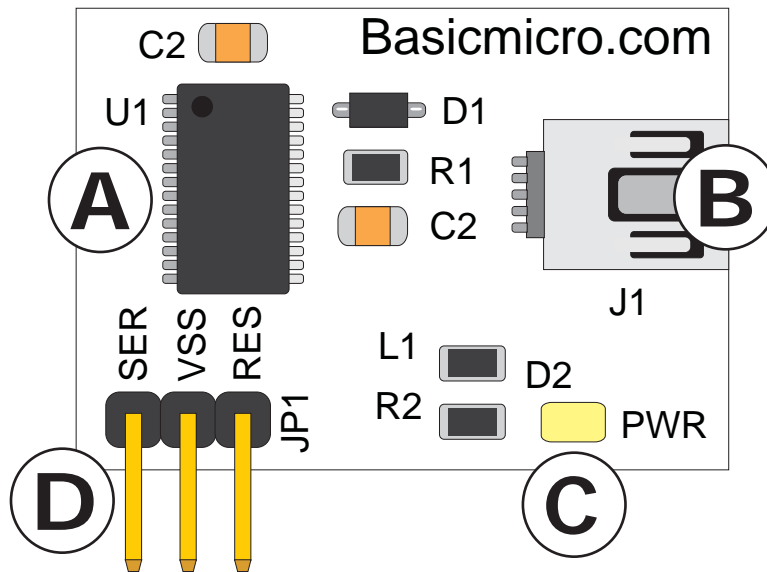
- FTDI Serial to USB
- USB 2.0 Full Speed (12mb)
- Power LED
- Solderless Breadboard Friendly
- Buss Powered



Basic Description

The BasicATOM Nano USB2Serial adapter can be used to program the BasicATOM Nano series of micros. It utilizes a FTDI USB to serial micro. The 3 pin header is solderless breadboard friendly making it easy to prototype with. The USB programmer is bus powered. It is preferred the programmer be connected directly to your PC and not through a hub. The BasicATOM Nano USB2Serial adapter is a simple USB to RS232 device. It can be replaced with almost any USB to Serial adapter.

Hardware Overview:



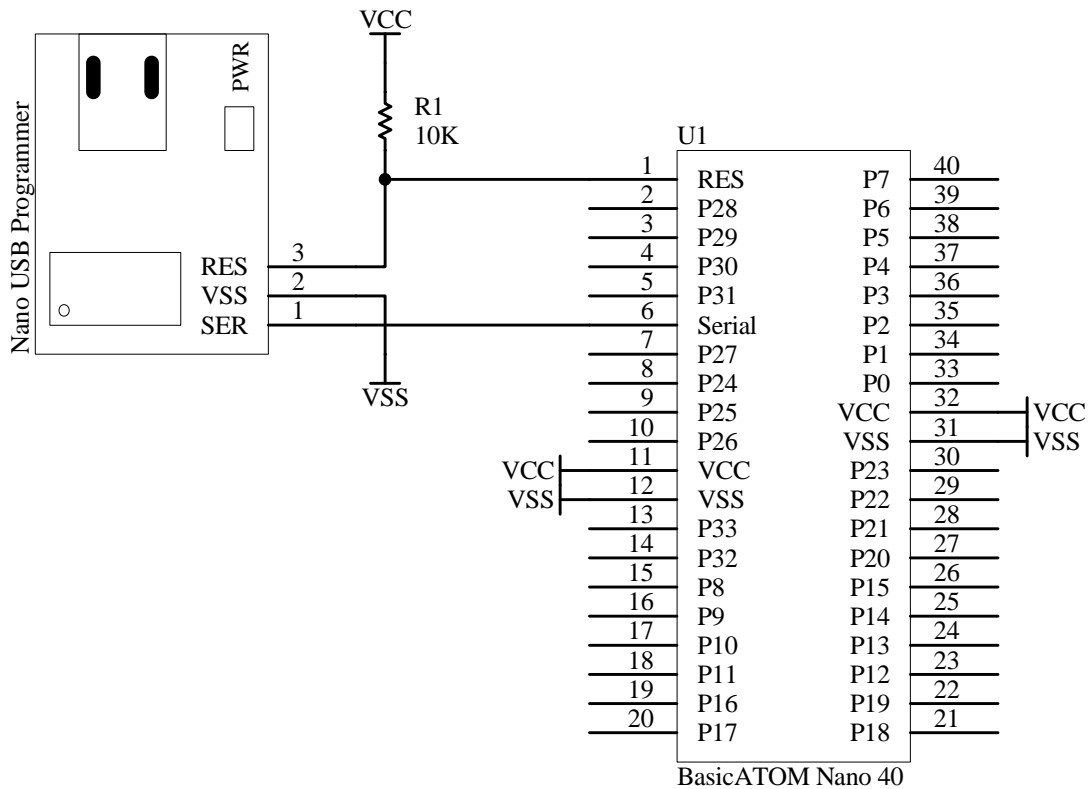
- A:** FTDI microcontroller, FT232RL.
- B:** USB connector, miniUSB Type B.
- C:** Power LED, input 5vdc max.
- D:** 3 pin header, solderless breadboard friendly.

Pin Assignment Overview

Pin	Description
SER	<ul style="list-style-type: none"> Transmit bidirectional serial data CMOS drive output 5VDC TTL input 5VDC
VSS	<ul style="list-style-type: none"> Common (GND)
RES	<ul style="list-style-type: none"> Controls target RESET pin 5VDC output

Programming The Nano

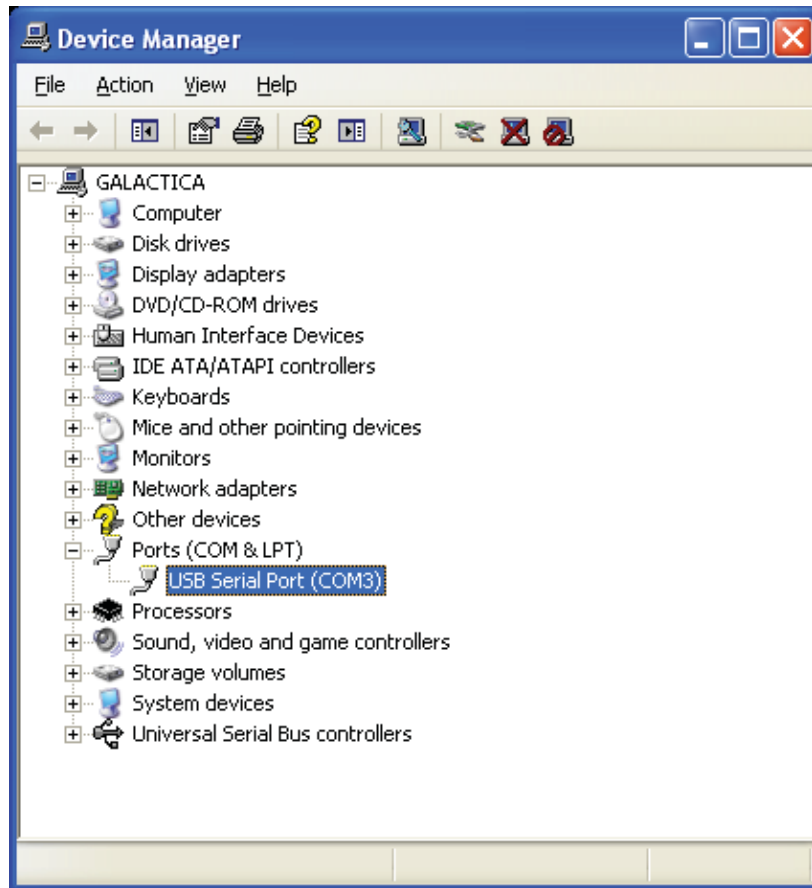
The BasicATOM Nano USB2Serial adapter is setup to program the BasicATOM Nano with relative ease. Only 3 connections are needed. The SER pin is a bidirectional serial I/O, RES is the reset control pin and VSS is the common (GND). The schematic illustrates how to connect the programmer to the Nano.



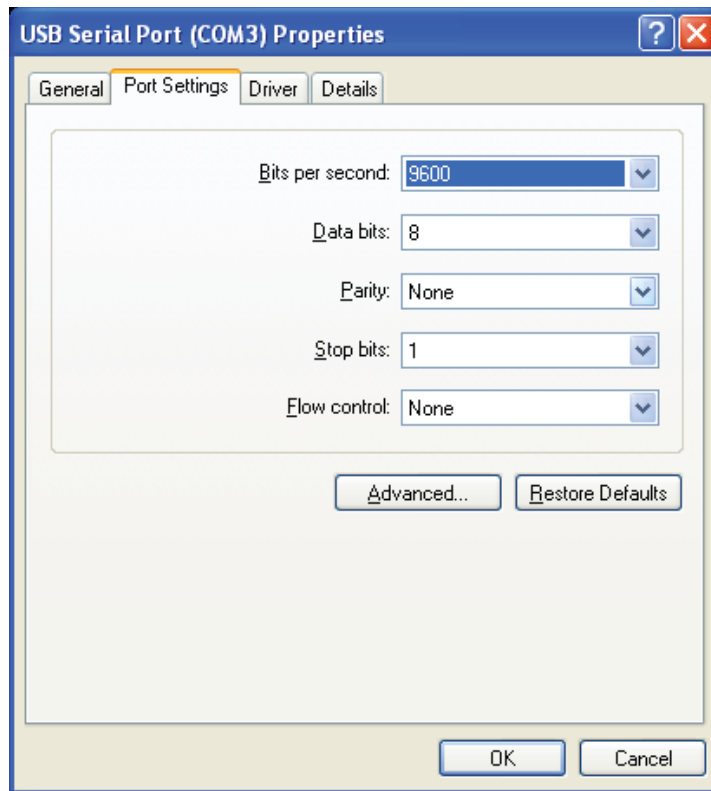
Driver Installation

You can download the FTDI customized driver from <http://www.basicmicro.com>. Some computers might have a default driver loaded. Or during installation a com port number over 20 is assigned. There is also a latency setting. This is used to delays bits sent to the device. Latency settings other than 1 will slow the programming. The following steps will cover proper driver installation and fixing potential issues that may occur.

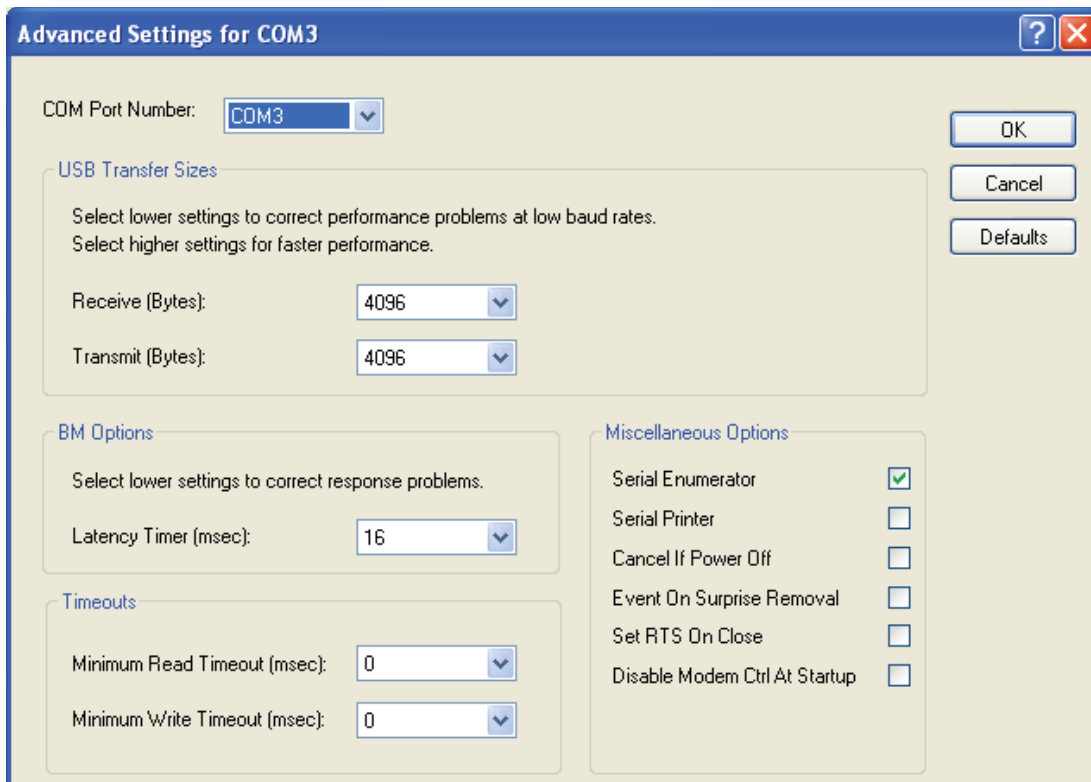
Open Device Manager -> Select Ports (COM & LPT), Right Click, Select "Properties".



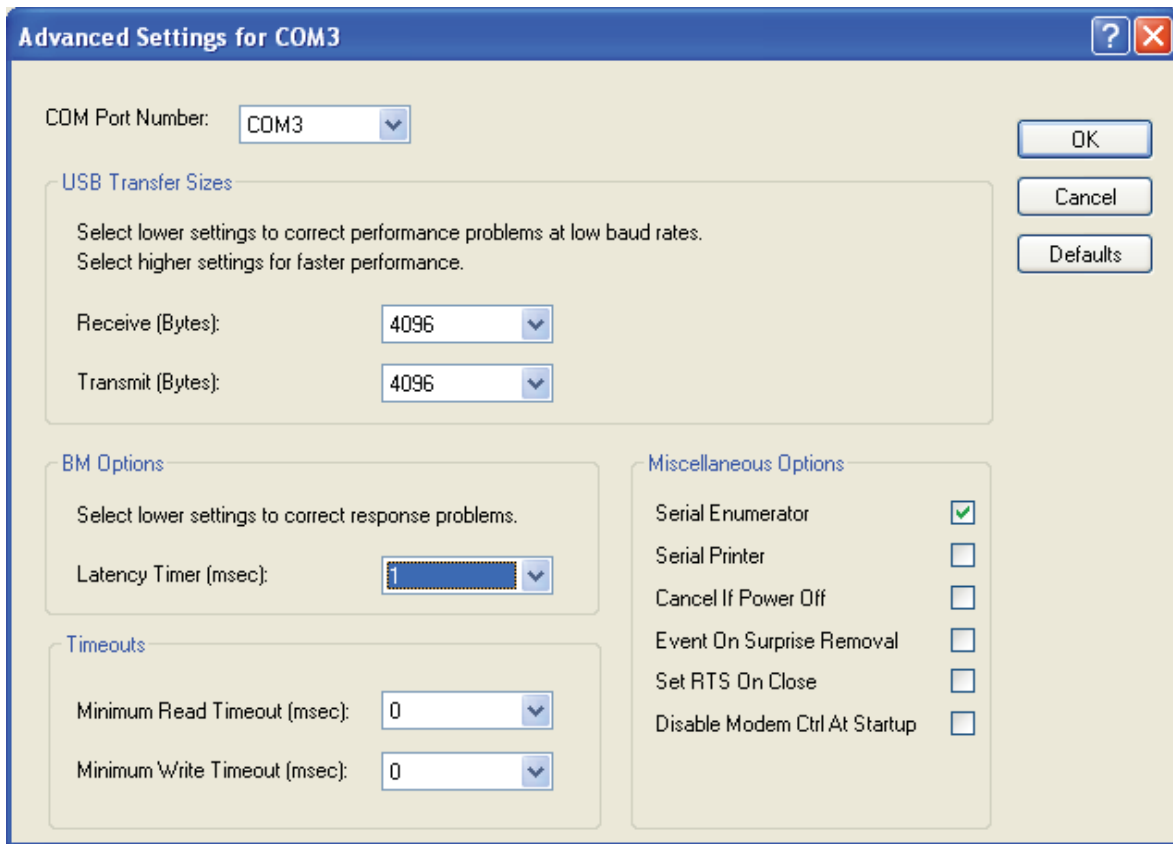
Properties Dialog -> Select "Port Settings" tab, Select "Advance" button.



Advance Settings Dialog -> Make sure COM port number is set to something lower than 25.



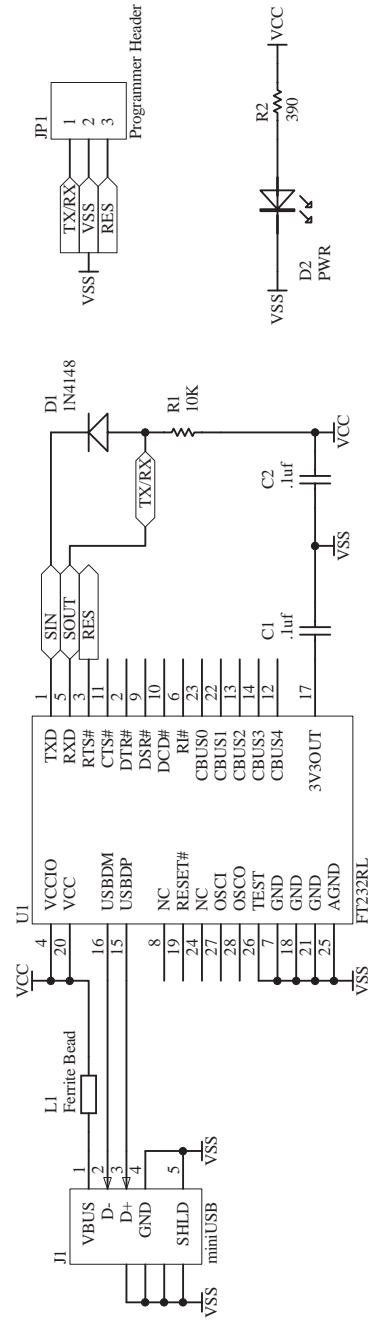
Advance Settings Dialog -> Make sure the "Latency Timer (msec)" option is set to "1".



After completing the above steps click "OK". The changes will not show right away until you restart your computer. However this is not necessary. The BasicATOM software will display the COM port you selected. Make sure you select the proper COM port setting in BasicATOM software.

Electrical Characteristics

Characteristic	Value (Units)
VCC Range (min - max)	4.9 – 5.25VDC
Current Draw (Idle)	20 mA
Current Draw (maximum)	50 mA
I/O Voltages (Low / High)	0.0V / 5.0V
I/O Logic	TTL / CMOS
I/O Maximum Current	6 mA sink, 6 mA source
Temperature Range	-40 to +85 C



Title		BasicATOM Nano USB2Serial Rev B (c) 2009	
Size	Number	Revision	
Letter			
Date:	3/27/2009	Sheet of	4
File:	E:\PCB\Designs\...\Programmer2_SchDoc	Drawn By:	Dale Kubin

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Contacts

Email: sales@basicmicro.com
Tech support: support@basicmicro.com
Web: <http://www.basicmicro.com>

Discussion List

A web based discussion board is maintained at <http://www.basicmicro.com>.

Technical Support

Technical support is made available by sending an email to support@basicmicro.com. All email will be answered within 48 hours. All general syntax and programming questions, unless deemed to be a software issue, will be referred to the on-line discussion forums.