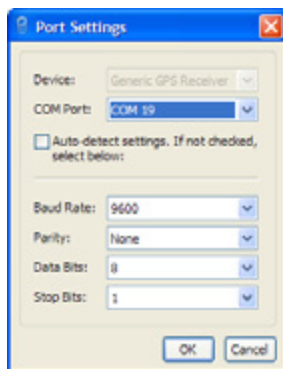


Starting the Trimble GPS Studio application

1. Set the serial port communication settings as follows:
Baud Rate – 9600
Parity – None
Data Bits – 8
Stop Bits – 1
2. NMEA Output – This is fixed to send GGA, GSA, GSV, and RMC messages.
3. NMEA Input – The TGS application can send the commands for Hot, Warm, and Cold starts to the Starter Kit. No other configuration messages are available through this software.



Low-profile SMT receptacle

You can use the 22-pin receptacle as an alternative to using the USB interface to connect to the GPS board. **You cannot use it at the same time as the USB;** only one method can be used at one time.

There is a white dot printed on the PCB beside pin 1.

The pin-out of the receptacle is as follows:

PPS Output	1	Xreset Input	2
UART B TXD (NMEA Out)	3	No Connect	4
UART B RXD (NMEA In)	5	External Antenna Short	6
Vcc	7	External Antenna Open	8
Ground	9	No Connect	10
Backup Power	11	Backup Power	12
Reserved	13	No Connect	14
Reserved	15	No Connect	16
Reserved	17	No Connect	18
Reserved	19	No Connect	20
Reserved	21	32 kHz Input (Condor)	22



P/N 75464-00

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Note: Please check [ftp://ftp.trimble.com/pub/sct/embedded/bin/Silvana/](http://ftp.trimble.com/pub/sct/embedded/bin/Silvana/) for available software and documentation.

Requirements

- A desktop or laptop computer with a free USB port and Internet access and that is running one of the following Microsoft® Windows® operating systems:
- Windows Vista® or Windows XP with Service Pack 2
- Windows 2000 with Service Pack 4
- A USB connection cable (supplied)
- A GPS antenna

Installing the FTDI USB/serial driver on your computer

Note: The starter kit uses a USB 2.0 dual serial port emulator interface chip from Future Technology Devices International Ltd. (FTDI). Go to www.ftdichip.com/Drivers/VCP.htm to check for the latest USB drivers.

1. Select and download the "setup executable" version to your local disk drive.
2. Use Microsoft Explorer to locate the executable file and then select it.
3. Follow the instructions from the installer to install the software.

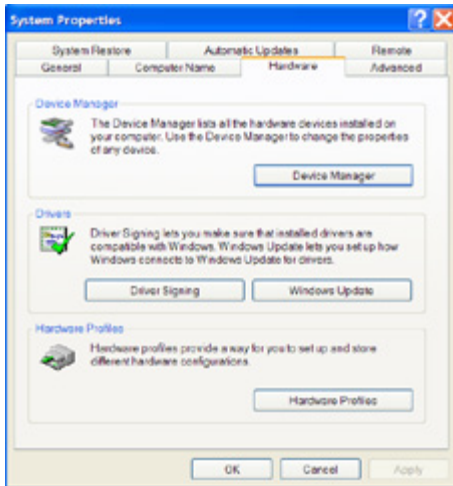
Connecting the GPS device to the computer using the USB serial interface

1. Connect the six-pin header of the USB cable to the GPS board. Make sure that the Up label appears on the same side as the GPS module on the printed circuit board (PCB):

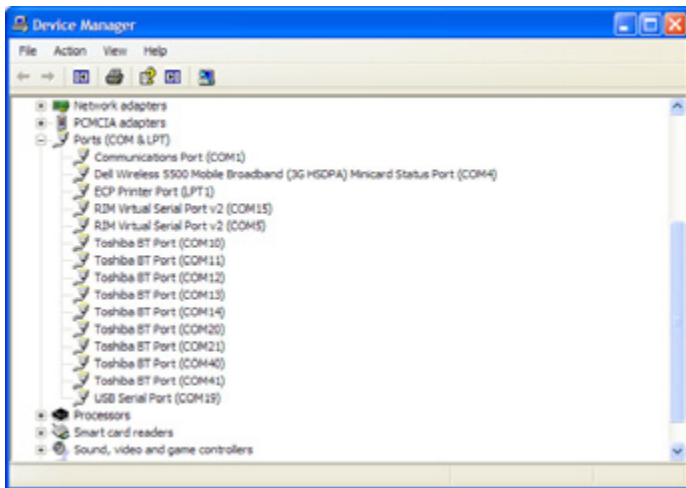


2. Connect the other end of the USB cable to your computer. The USB cable provides power to the unit.

- On the desktop computer select the My Computer icon and right-click. Select *Properties* and then select the *Hardware* tab:

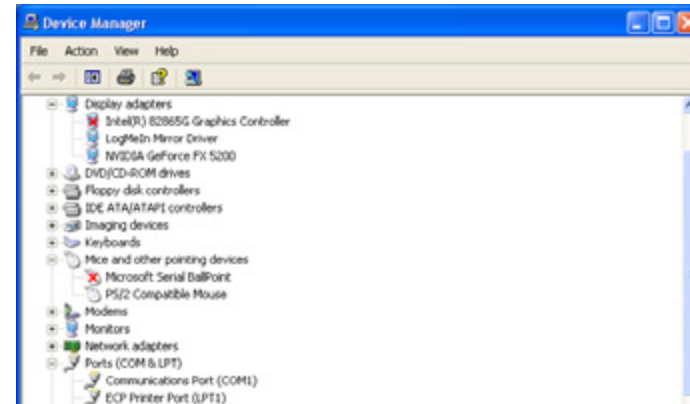


- Click **Device Manager**:



- Scroll down to and then open the *Ports (Com & LPT)* section and make a note of the USB Serial Port COM number. In this example it is COM19.

- To check for possible conflicts with other hardware, check the entries in the *Mice and other pointing devices* section. If there is an entry for a Microsoft Serial Ballpoint mouse, and you know that this does not exist on the system, right-click it and then select *Disable*:



Connecting the antenna

Both the Ana Paola and Silvana starter kits have a built-in patch antenna. Place the GPS board with the patch antenna facing towards the sky—either outdoors in clear view or indoors near a window:



The Silvana starter kit also has a connection for an external antenna. You may connect this and place the antenna either outdoors in clear view of the sky or indoors near a window. A built in RF switch automatically detects that there is an external antenna present and uses it in the GPS solution.