



# Installing Bitpipe™ USB Drivers

Application Note AN0033

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## 1 Document revision history

Revision	Date	Comments
1.0	2017-07-21	First release
2.0	2017-11-30	Add driver description for the BP43T1-US, BP4T1-USV and BP43-T4 radios.

## 2 Scope

This application note applies to Windows machines connected to a BitPipe™ Modem. The devices for which the application note applies is listed below:

Product	Cellular radio
BC3G-US-SMA	EHS5-US
BP32G-W-UFL	EHS6
BP43G1-US-UFL	ELS61-US
BP43T1-US	LE910-NA1
BP4T1-USV	LE910-SV1
BP43T4-US	LE910-NA V2

## 3 BP32G & BC3G

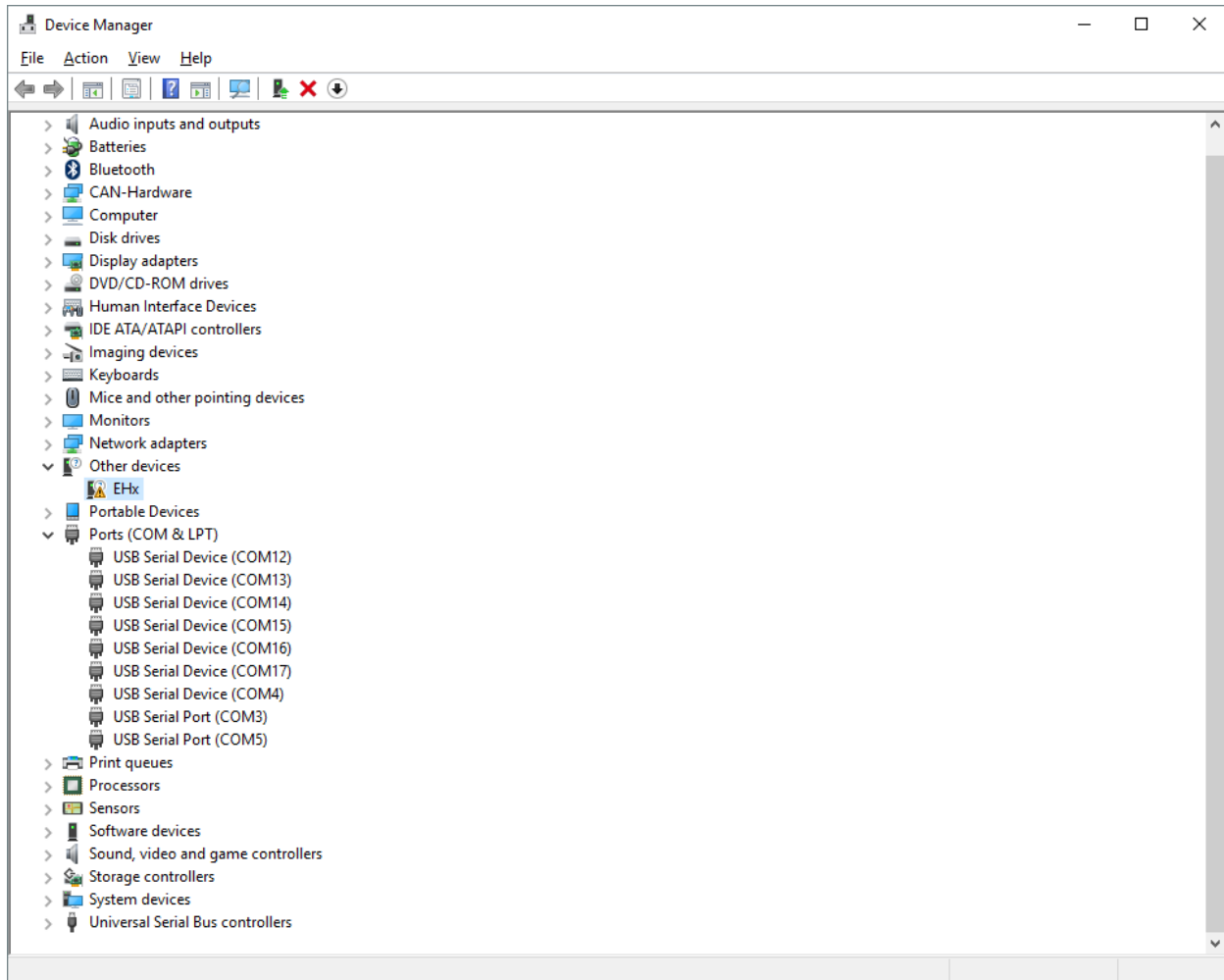
This section describes how to enumerate the USB devices exposed by the BP32G (EHS6) or BC3G (EHS5-US) devices on Windows.

For the BitPipe™ to work, ensure that the hardware setup is complete. Refer to device specific instructions for details.

The following devices will be enumerated once the physical USB connection is done with the interface enabled:

- 6x virtual COM ports (some of these are connected to AT interpreters);
- 1x Modem device;
- 1x Reserved port.

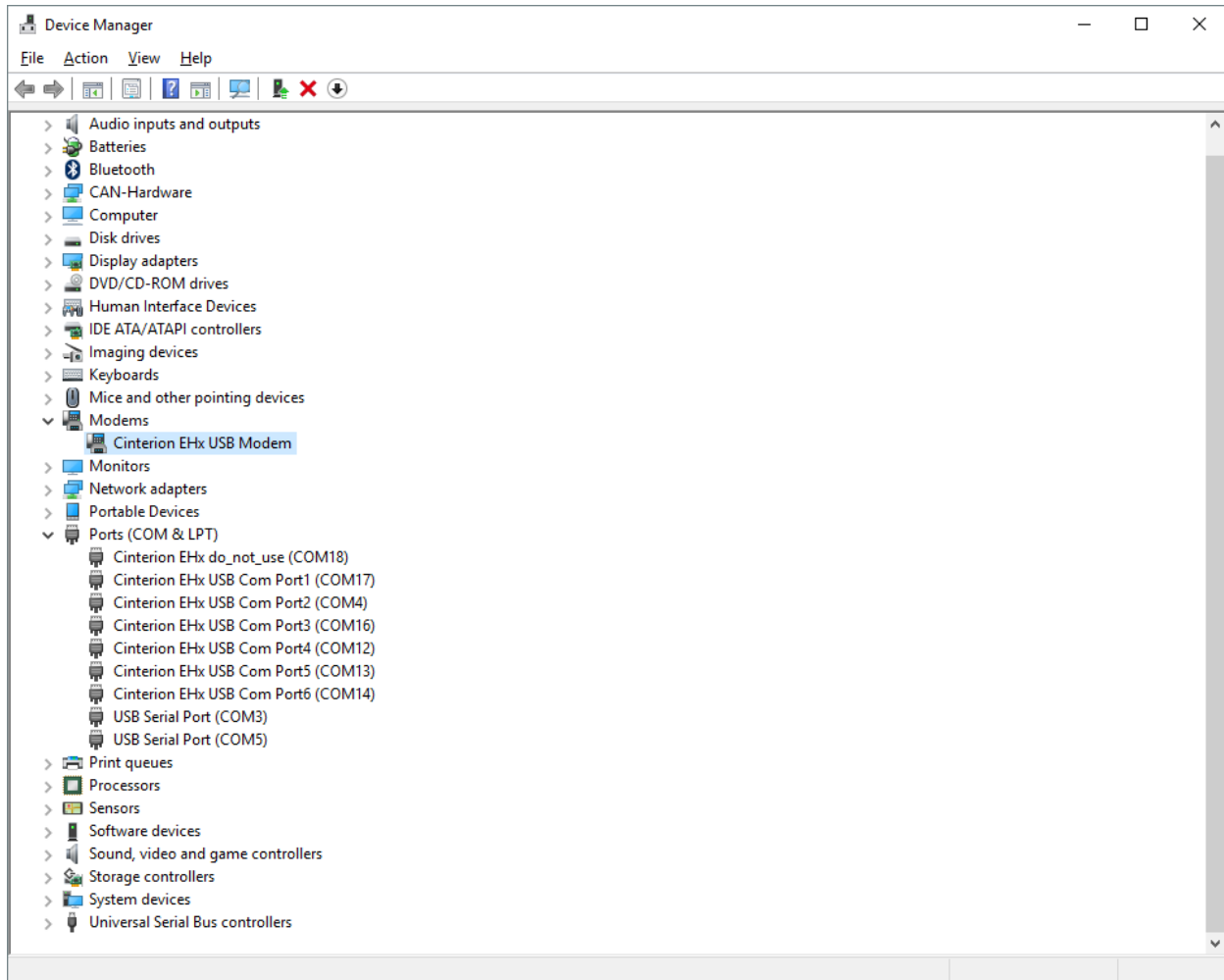
When the Cinterion EHx is detected by Windows for the first time, it is possible that Windows detects some Cinterion USB ports as Serial ports (as illustrated below). In those cases, there will not be many Unknown Devices; only one device will appear as unknown in the device manager.



Instructions to update drivers (Note: If you've already previously installed the USB drivers, skip this part):

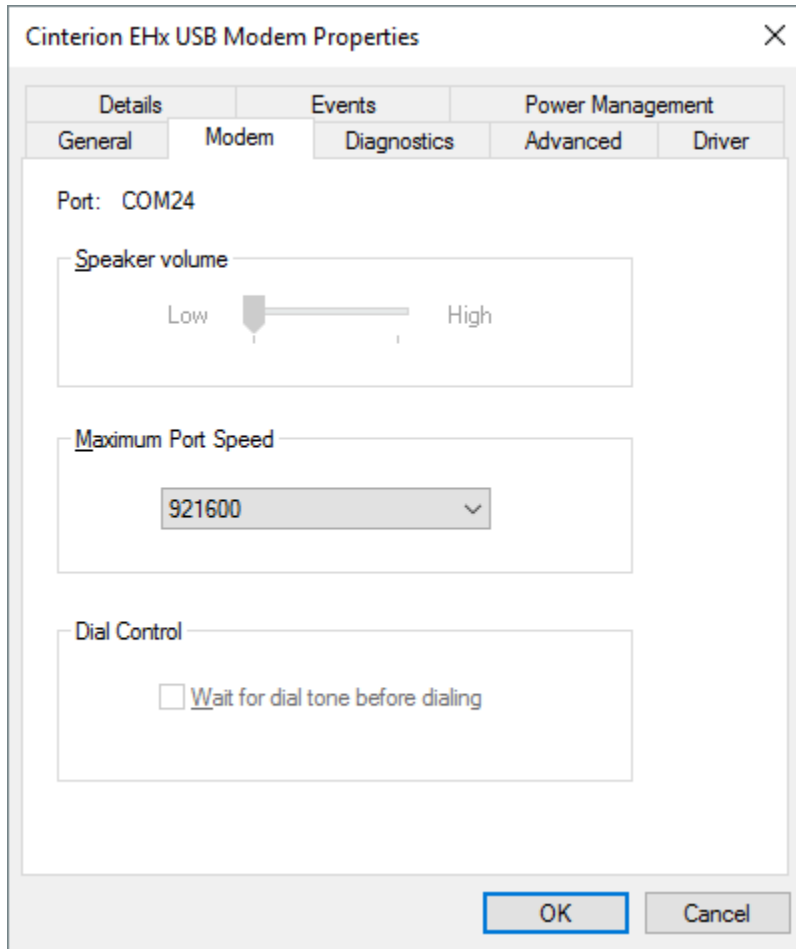
1. Download the drivers from the Briowireless website in the Support section
2. Unzip the drivers in a directory on your computer;
3. Right-click on the unknown devices (or "USB Serial Device X") and select Update Driver Software...
4. Select Browse my computer for driver software
5. Navigate to the directory where the drivers were extracted.
6. Click Next
7. Repeat for all unknown devices (or "USB Communication Device X");

Your Device Manager should have the following devices (the COM ports may vary):



The COM port to send the AT commands can be found in the device manager.

1. Expand the Modems devices
2. Right-click on the Cinterion EHx USB Modem device and select Properties.
3. In the properties window, switch to the Modem tab.
4. The COM port should be illustrated at the top as illustrated below:



## 4 BP43G1

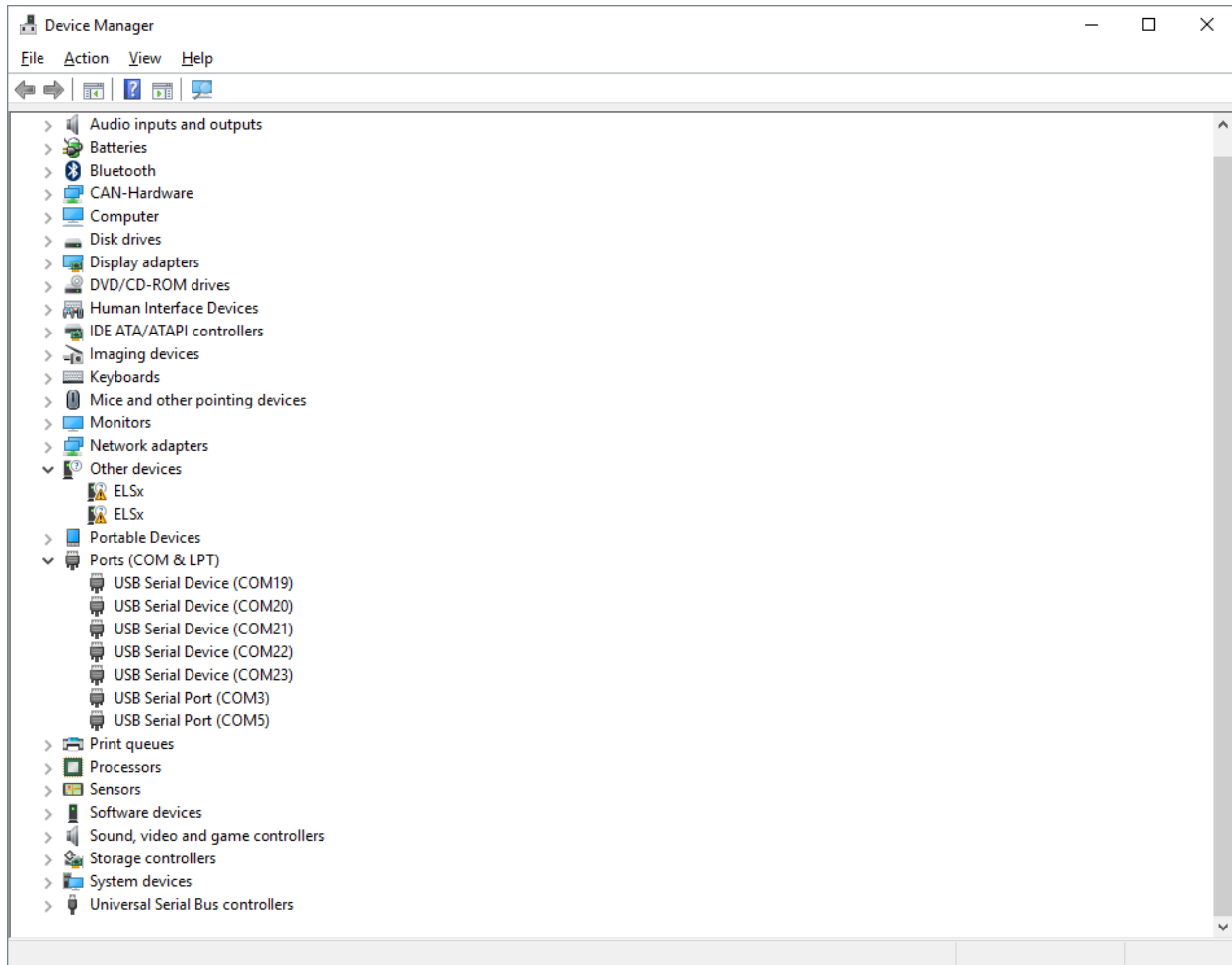
This section describes how to enumerate the USB devices exposed by the BP43G1 (ELS61-US) devices on Windows.

For the BitPipe™ to work, ensure that the hardware setup is complete. Refer to device specific instructions for details.

The following devices will be enumerated once the physical USB connection is done with the interface enabled:

- 3x virtual COM ports (Some of these are connected to AT interpreters);
- 1x Modem device;
- 1x Reserved port;
- 2x Network adapters (Gemalto M2M wireless adapters).

When the ELS61-US is detected by Windows for the first time, it is possible that Windows detects some Cinterion USB ports as Serial ports (as illustrated below). In those cases, there will not be many Unknown Devices; only two devices will appear as unknown in the device manager.

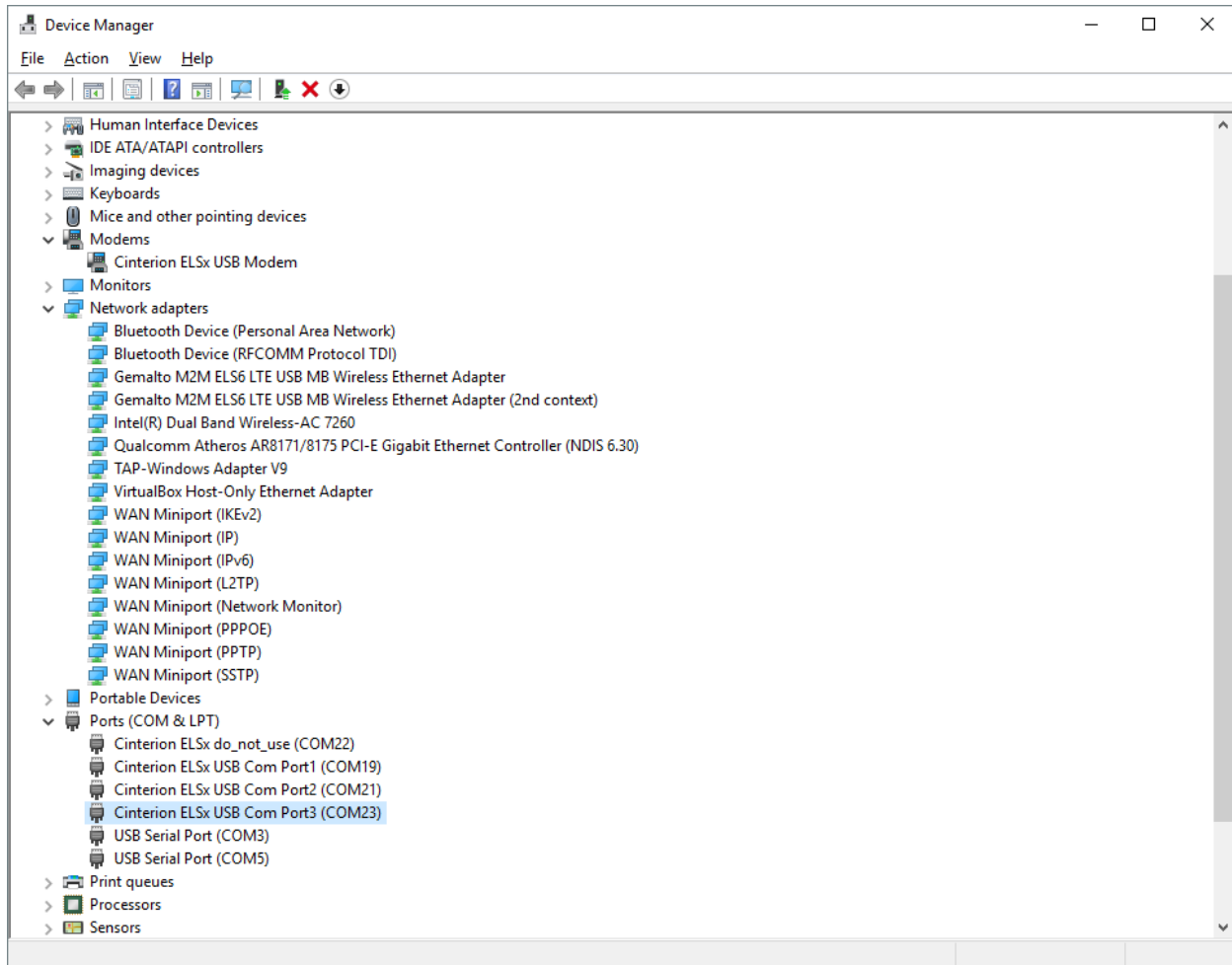


Instructions to update drivers (Note: If you've already previously installed the USB drivers, skip this part):

1. Download the drivers from the Briowireless website in the Support section
2. Unzip the drivers in a directory on your computer;
3. Right-click on the unknown devices (or "USB Serial Device X") and select Update Driver Software...
4. Select Browse my computer for driver software
5. Navigate to the directory where the drivers were extracted.
6. Click Next
7. Repeat for all unknown devices (or "USB Communication Device X");

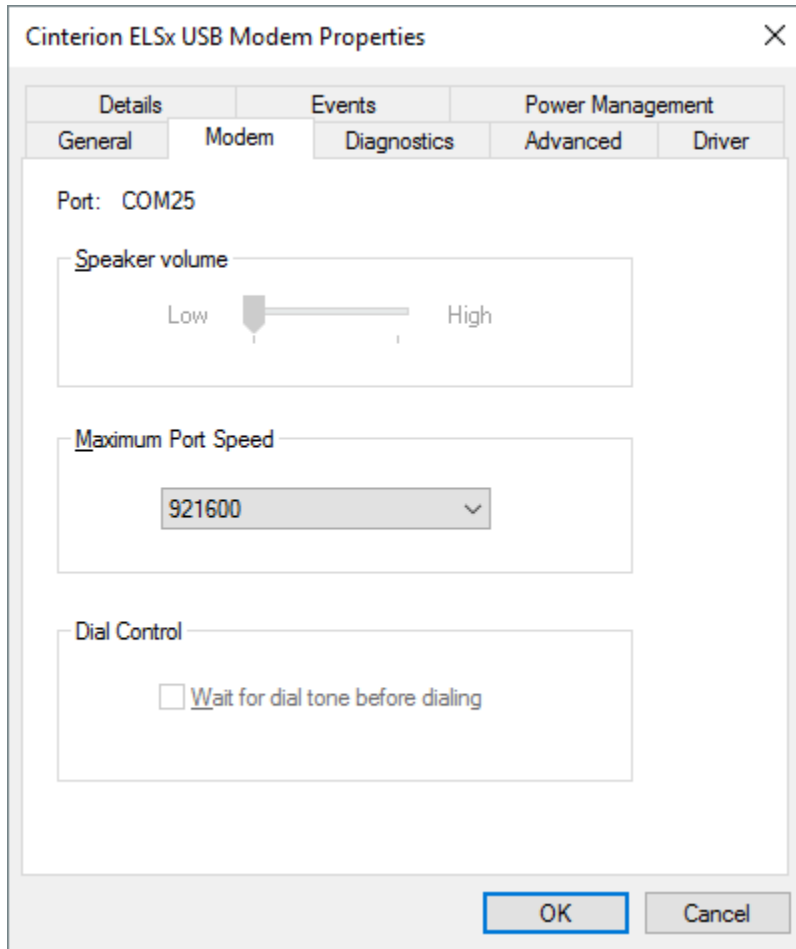
Your Device Manager should have the following devices (the COM ports may vary):



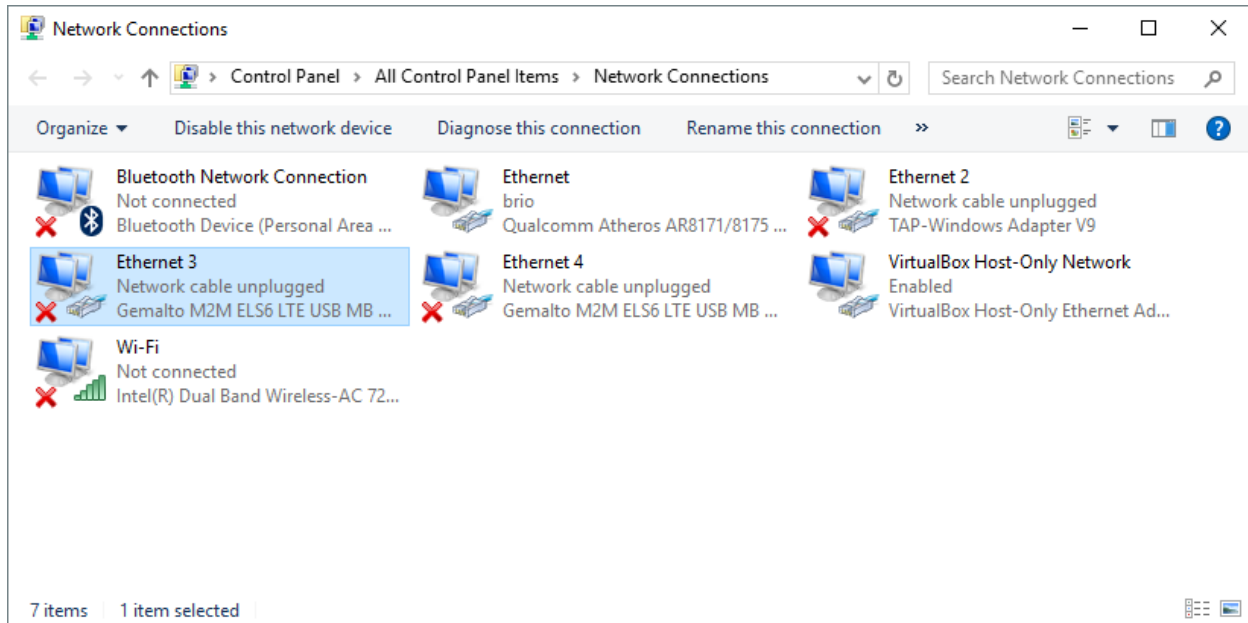


The COM port to send the AT commands can be found in the device manager.

1. Expand the Modems devices
2. Right-click on the Cinterion ELSx USB Modem device and select Properties.
3. In the properties window, switch to the Modem tab.
4. The COM port should be illustrated at the top as illustrated below:



Once the drivers have been installed, the two network adapters should appear in the Network Connections as shown below:



## 5 BP43T1-US, BP4T1-USV, and BP43-T4 modules

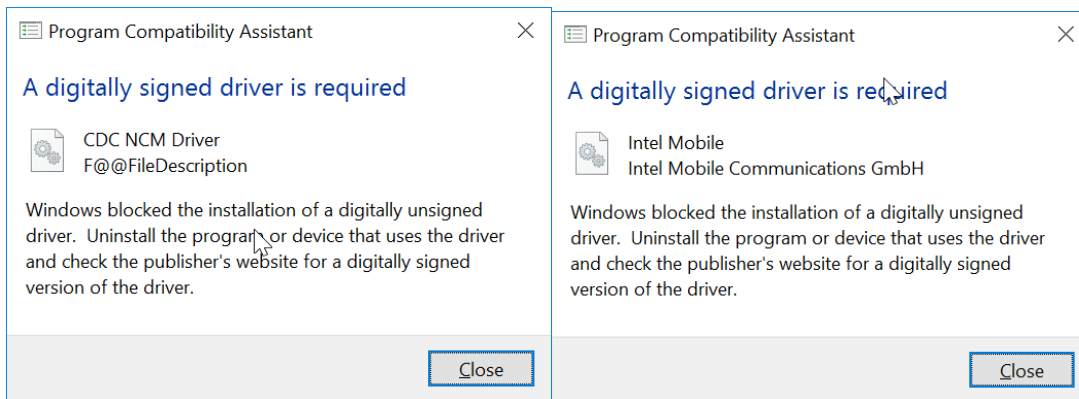
For the BitPipe™ to work, ensure that the hardware setup is complete. Refer to device specific instructions for details. To use your Bitpipe as broadband modem on Windows, you need to install the drivers.

Before proceeding to Bitpipe driver installation please read the following cautions:

- If you previously plugged the Bitpipe to your PC before installing the provided drivers, Windows may have automatically installed one of its default drivers. Uninstall these drivers before proceeding because the Bitpipe will not operate correctly with them.
  - All previous Telit drivers for this Bitpipe should be uninstalled before installing this driver.
  - Unplug your Bitpipe before starting the installation process.
1. Download the drivers from the Briowireless website in the Support section.
  2. Extract the drivers in a directory on your computer. Two different installers are provided according to the architecture of the host:
    - a. For 32-bits architecture: TelitModulesDrivers\_x86.msi
    - b. For 64-bits architecture: TelitModulesDrivers\_x64.msi

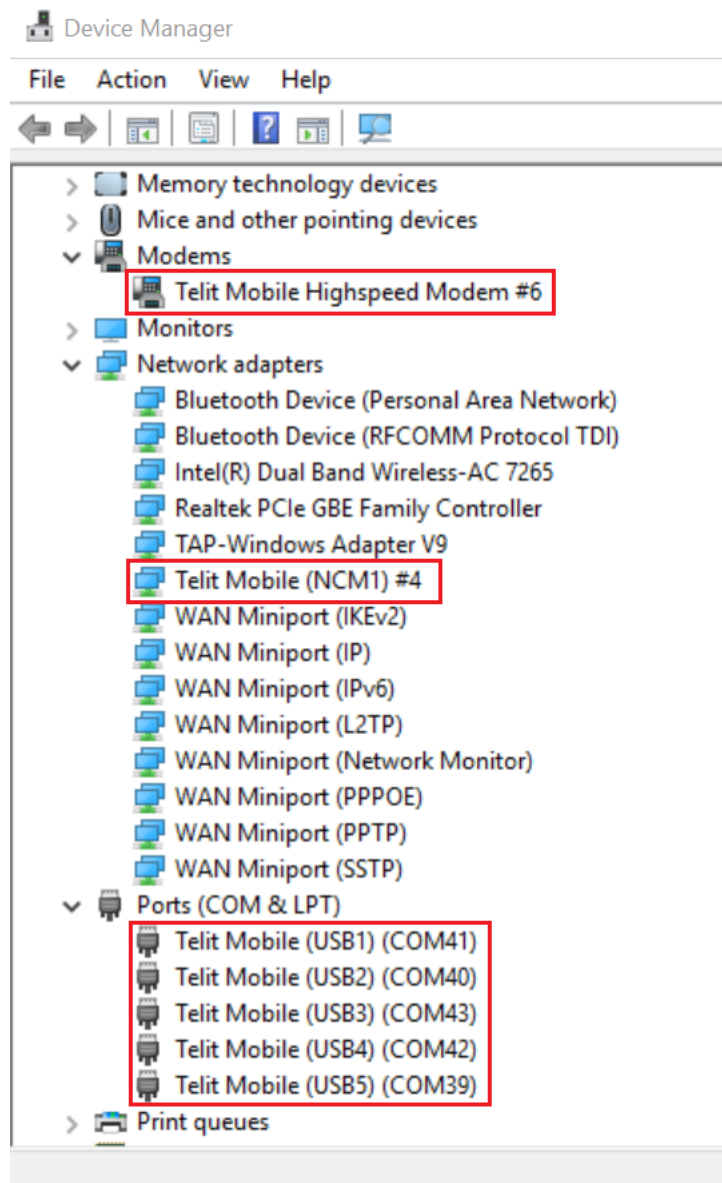
3. Run the installer specific to your architecture and follow the instruction of the installation wizard. Two installation options are offered: Complete and Custom. We recommend to use the Complete option since it installs all the drivers. Click Next to start the installation.

NOTE: On Windows 10, you may see the following popup during the installation:



This is because the provided drivers are not WHQL certified as required by the secure boot option in Windows 10. In order for the drivers to properly work, you need to disable the secure boot option.

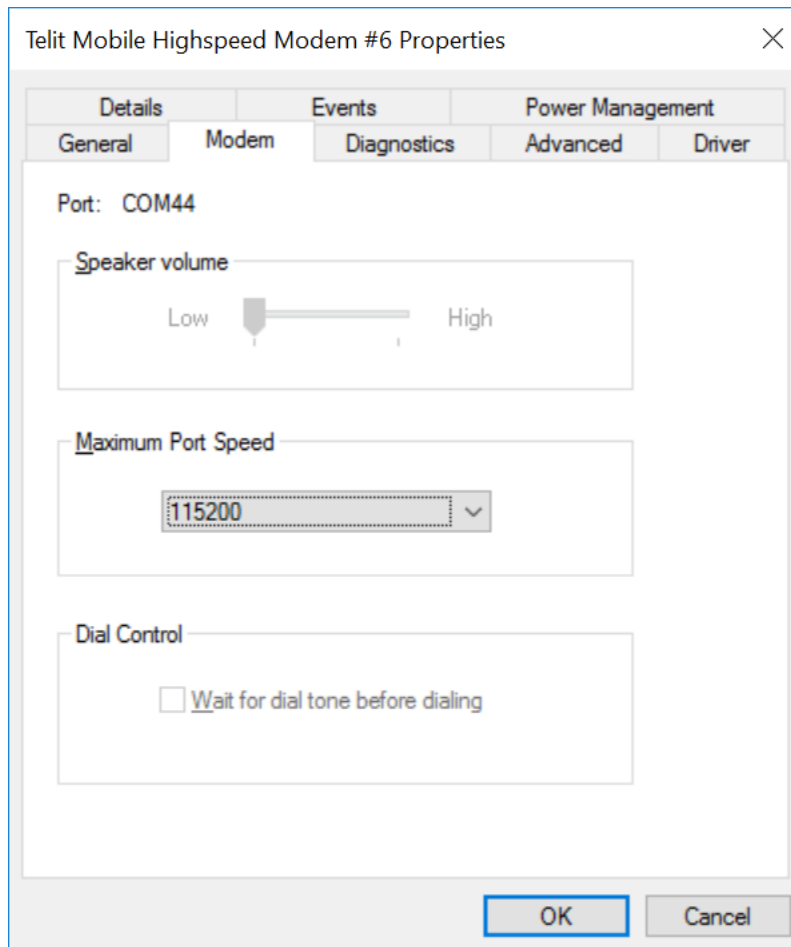
4. When the installation is complete, click Finish and open the Device manager. You should have the following devices (the COM port may vary):



WARNING: In order to use NCM mode for establishing data connection on Bitpipe models models BP43T1-US, BP4T1-USV, and BP43-T4, please ensure that this mode is enabled: “Telit Mobile NCM” driver should be loaded under the “Network adapters” section. If you find any other drivers instead, like the CDC MBIM which is not supported, please consider setting the appropriate USB configuration to enable NCM mode. Note that the USB configuration of the radio enables NCM by default. But if this setting has been changed, you can restore it back through the AT command (AT#USBCFG=0) and rebooting the module.

If you need to configure your modem using AT commands, you have to know the COM port the modem was assigned to. You can easily find this info using the Device Manager:

- Expand Modem.
- Right-click on Telit Mobile Highspeed Modem and select Properties.
- In the properties window, switch to the Modem tab.
- The COM port is illustrated at the top as illustrated below:



NOTE: To uninstall the Bitpipe drivers, run the installer package corresponding to your architecture (32 or 64 bit) and select Remove.

## 6 Support

[support@briowireless.com](mailto:support@briowireless.com)

For online support and downloads please go to:

<https://www.briowireless.com/>