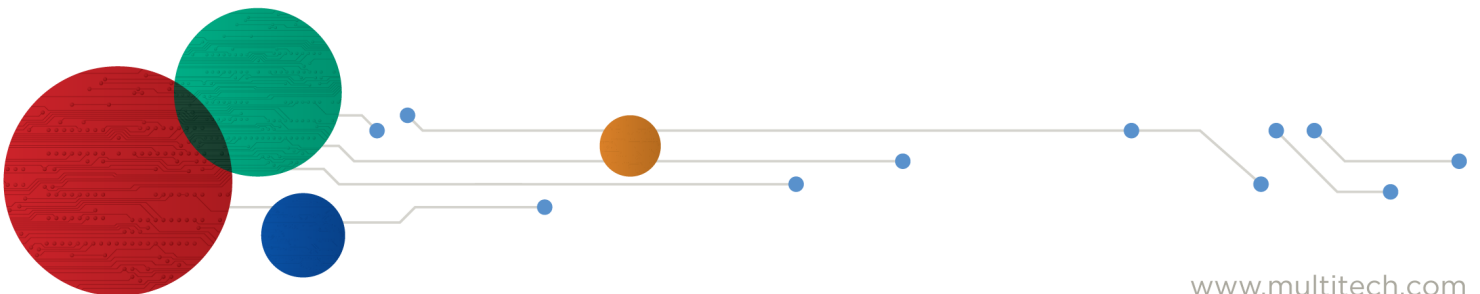


USB Driver

Installation Guide for C2 and EV3 Devices



USB Driver Installation Guide for C2 and EV3 Devices

For the following devices: MTSMC-EV3-U, MTSMC-EV3-MI-IP/GP, MTD-EV3, MT100UCC-EV3, MTC-EV3-B03, MTC-EV3-B04, MTPCIE-EV3, MTPCIE-C2, MTQ-EV3-B01, MTQ-EV3-B02, MTQ-C2-B01, MTQ-C2-B02

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Chapter 1 – Installing Drivers for Non-UIP Devices

Installing on Linux

The Linux OS includes a generic USB driver for modems.

To install the device on Linux Kernel 2.6.x and newer, connect USB cable from the device to a USB port on your computer. For most recent Linux distributions, there are no drivers to install.

Beginning with Linux Kernel 3.18, an LTE driver named option was included in Linux. If using an older version of Linux, build an updated option driver.

If the operating system recognizes the modem, devices named `/dev/ttyUSBx` are created, for example:

- `/dev/ttyUSB0` Diagnostic port
- `/dev/ttyUSB1` NMEA port
- `/dev/ttyUSB2` Auxiliary port
- `/dev/ttyUSB3` Modem port

Note: AT commands are allowed on modem and auxiliary ports.

If the operating system recognizes the modem, devices named `/dev/ttyUSBx` are created, for example:

- `/dev/ttyUSB0`
- `/dev/ttyUSB1`
- `/dev/ttyUSB2`
- `/dev/ttyUSB3`
- `/dev/ttyUSB4`

Only the following devices can be used for AT commands:

- `/dev/ttyUSB2` (data port for PPP connections and AT commands)
- `/dev/ttyUSB3` (generic port for AT commands)

Need to know which Linux kernel we are testing on and what devices are created.

Troubleshooting Linux

If Linux does not create devices, check for the kernel module:

```
# lsmod | grep option
```

If entries aren't found, load the kernel module with root privileges:

```
# modprobe option
```

If this returns an error response, such as

```
# FATAL: Module option not found
```

, the kernel module is not on your system. You will need to build the driver.

Building a Linux Driver

If the Linux driver is not recognized by your system, the driver may need to be customized for your device.

Note: To avoid runtime loading, build the driver as part of the kernel instead of as a module.

1. Retrieve the appropriate kernel source code version for your system. This should be in your OS distribution package. Unpack/install it.

2. In the root directory open the file:

```
/drivers/usb/serial/option.c
```

3. Check for the existence of the proper #define statement.

For EV3 devices:

```
#define TELIT_PRODUCT_DE910_DUAL 0x1010
```

For C2 devices:

```
#define TELIT_PRODUCT_CE910_DUAL 0x1011
```

4. If the define statement is missing, add it and then add the following in the usb_device_id option_ids[]:

For EV3 devices:

```
{ USB_DEVICE (TELIT_VENDOR_ID, TELIT_PRODUCT_DE910_DUAL) }
```

For C2 devices:

```
{ USB_DEVICE (TELIT_VENDOR_ID, TELIT_PRODUCT_CE910_DUAL) }
```

5. Save changes and close the file.

6. From the unpacking root directory, type

```
# make menuconfig
```

7. Configure the kernel according to the considered system configuration.

8. Browse to menu **Device Driver > USB Support > USB Serial Converter support** and select **USB driver for GSM and CDMA modems**.

9. To start the build once configured, type

```
# make
```

The kernel module option.ko is in the directory drivers/usb/serial. If the kernel was built previously, compile the module by typing:

```
# make M=drivers/usb/serial
```

To load the module use

```
modprobe
```

```
or
```

```
insmod
```

```
.
```

Windows Release Notes

We tested ev3-c2-usb_windriver_8.00.04-1.zip driver on the following Windows operating systems.

- **Windows 8 x86 and x64, Windows 7 x86 and x64, Vista x86 and x64, XP x86 and x64, Windows Server 2012, Windows Server 2008 x86 and x64, and Windows Server 2003 x86**

Drivers install correctly, but may require .NET Framework version 3.5 or older.

After installing the driver for this device, the device may not be available when Windows comes out of a sleep/hibernate state. To correct this issue, unplug the device from the USB port and then plug it back in to the same port.

- **Windows Server 2003 x64**

Not supported.

Windows Notes

Note:

This driver is not compatible with Windows 2003 x64

Installing on USB Host Powered Devices

When you connect a USB host powered device to a computer through a USB cable, the Windows **Add New Hardware Wizard** may display **Cannot Install this Hardware**. If this occurs, click **Finish**. Windows detects additional devices and prompts you to install them.

Installing on Non-USB Powered Devices

Turn on the device and wait 15 seconds before connecting the USB cable. If you connect the USB cable before supplying power to the device, the Windows **Add New Hardware Wizard** may appear and show **Cannot Install this Hardware**. If this occurs, click **Finish**. Windows detects additional devices and prompts you to install the additional devices. If Windows does not detect new device, unplug the USB cable, turn the device off and on, wait 15 seconds, insert the USB cable, and install devices when prompted.

Downloading the Windows USB Driver

If you haven't downloaded the driver:

1. Go to multitech.com and search to find your device's model page. Your device's model number is on the product label.
2. Under **Downloads**, click on the Windows USB Driver. A popup window appears.
3. Click to **Download** the driver zip file to your computer.
4. Extract the files to your computer.

Installing on Windows 8, 7 or Vista

This process installs multiple drivers and ports.

Note: If you previously installed USB drivers for this device, uninstall them before installing or re-installing this driver. Uninstall all existing drivers for this device. Refer to [Uninstall Windows Drivers](#) for details.

Before you connect the device (disconnect the device if you connected it):

CAUTION: If you connected the device before installing the drivers, Windows may install drivers automatically. Your device may not operate correctly with these drivers. Uninstall the drivers before proceeding. See [Remove Microsoft Installed Drivers](#) for details.

1. Go to the location where you extracted the driver and open the **EV3-C2-USB\Driver** folder.
2. Right-click on **TelitUSBInstaller_Qc_U8.00.04.exe** and select **Run as Administrator**.
3. Click **Yes** or **Allow** to allow the installer to make changes to your computer.
4. Click **Next** and follow the instructions in the installation wizard.
5. Click the **Install** option when prompted, for example, Install this driver software anyway.
6. Click **Finish**.
7. Connect USB cable from the device to a USB port on your computer. Windows indicates when the device is ready to use.
8. When opening a terminal package, five new com ports appear. Two of them accept AT commands. To determine which two accept AT commands, either attempt to send commands on each port, or find the ports listed in Device Manager under **Modems**.
9. Signal strength LEDs require a device reboot after installing software. Disconnect the device from the computer's USB port for a few seconds and reconnect the device to the same USB port.

Installing on Windows XP

This process installs two drivers.

Note: If you previously installed USB drivers for this device, uninstall them before installing or re-installing this driver. Uninstall all existing drivers for this device. Refer to [Uninstall Windows Drivers](#) for details.

Before you connect the device (disconnect the device if you connected it):

1. Go to the location where you extracted the driver and open the **EV3-C2-USB\Driver** folder.
2. Right-click on **TelitUSBInstaller_Qc_U8.00.04.exe** and select **Run**.
3. Click **Next** and follow the instructions in the installation wizard.
4. Click **Continue Anyway** each time this screen appears.



5. Click **Finish**.
6. Connect USB cable from the device to a USB port on your computer. After it detects the hardware, Windows opens the New Hardware Wizard.
7. Select **No, not this time** and click **Next**.
8. If Software Installation-Windows Logo testing message appears, click **Continue Anyway**.
9. Select **Install the software automatically (Recommended)** and click **Next**.
10. Select **Finish**.
11. Repeat Steps 7-10 for each additional New Hardware Wizard. Windows indicates when the device is ready to use.
12. Signal strength LEDs require a device reboot after installing software. Disconnect the device from the computer's USB port for a few seconds and reconnect the device to the same USB port.

Uninstalling Windows Drivers

Note: Disconnect the device before uninstalling drivers.

Windows 8 or 8.1

To uninstall drivers from Windows 8 or 8.1:

1. Open Windows **Programs and Features**.
2. Scroll to **TelitModulesDrivers_x##**, where ## is 64 or 86, and click Uninstall. Confirm that you want to uninstall the driver.

Uninstalling the TelitModulesDrivers, uninstalls all related Telit modems, ports, and drivers, so you don't need to uninstall these individually.

Windows 7

To uninstall drivers from Windows 7:

1. Open **Programs and Features** from the Windows Control Panel.
2. Scroll to **TelitModulesDrivers_x##**, where ## is 64 or 86, and click Uninstall. Confirm that you want to uninstall the driver.

Uninstalling the TelitModulesDrivers, uninstalls all related Telit modems, ports, and drivers, so you don't need to uninstall these individually.

Windows XP

To uninstall drivers from Windows XP:

1. Open the **Control Panel** and go to **Add or Remove Programs**.
2. Uninstall **Windows Driver Package – Telit Wireless Solutions (telitusbser) Modem**.
3. Uninstall all other **Telit modems, Ports and USB**.

Chapter 2 – Installing UIP Device Drivers

Downloading and Installing the Windows Universal IP Driver

Use this driver with **MTSMC-EV3-MI-IP/GP** devices.

Before you connect the device (disconnect the device if you connected it), download and install the Universal IP driver. If you already have the driver, skip to Step 5.

1. Go to the Multi-Tech Support page, www.multitech.com/support.go.
2. Select your product from the Product Families drop down list.
3. Click **Drivers**.
4. Select and save the driver to your computer:
 - For x86 operating systems, select **VCP_v1.3.1_Setup.exe**
 - For x64 operating systems, select **VCP_v1.3.1_Setup_x64.exe**
5. Double-click the **.EXE** file to start installation.
6. Click **Next** twice.
7. Click **Finish**.
8. Connect USB cable from the device to a USB port on your computer.

Windows indicates when the device is ready to use.