



USB Driver

Installation Guide for LTE Devices

USB Driver Installation Guide

For the following devices: MTSMC-LEU1-U, MTSMC-LAT1-U, MTSMC-LVW2-U, MTSMC-LAT3-U, MTSMC-LVW3-U

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World Headquarters

Multi-Tech Systems, Inc.
2205 Woodale Drive, Mounds View, MN 55112
Phone: (800) 328-9717 or (763) 785-3500
Fax (763) 785-9874

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Device Driver Installation

Installing on Linux

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`
- `/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)

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
```

Check `dmesg` output to see that the radio was detected:

```
# dmesg | grep option
```

```
usbcore: registered new interface driver option
option 1-2.3:1.0: GSM modem (1-port) converter detected
option 1-2.3:1.2: GSM modem (1-port) converter detected
option 1-2.3:1.3: GSM modem (1-port) converter detected
option 1-2.3:1.4: GSM modem (1-port) converter detected
option 1-2.3:1.5: GSM modem (1-port) converter detected
option 1-2.3:1.6: GSM modem (1-port) converter detected
```

If this returns an error response, the kernel module is not on your system. You will need to build the driver.

Building a Linux Driver

If using the device with the Linux operating system:

1. Download latest stable kernel. Check <http://www.kernel.org> for the latest stable kernel. In the terminal window, enter the following:
 - a. **sudo su** and then the password to put it into root mode.

- b. `cd /usr/src`
 - c. `wget https://www.kernel.org/pub/linux/kernel/v3.x/linux-x.x.x.tar.xz`, where X.X.X equals the version number for the latest stable kernel
2. Untar the kernel. To do this, enter: `tar -xvJf linu-x.x.x.x.tar.xz`.
3. Edit option.c source file for the LE910 module:
 - a. `gedit linux-x.x.x/drivers/usb/serial/option.c`
 - b. Verify if the following #define statement exists:
LE910 module: `#define TELIT_PRODUCT_LE910 0x1201`
 - c. If the #define statement does not exist, add the statement.
 - d. Add the following struct:


```
static const struct
    option_blacklist_info telit_le910_blacklist = {
    .sendsetup = BIT(0), .reserved = BIT(1) | BIT(2)
    };
```
 - e. Add the following line to `usb_device_id option_ids[]` structure:


```
{ USB_DEVICE(TELIT_VENDOR_ID,
              TELIT_PRODUCT_LE910),.driver_info =
              (kernel_ulong_t)&telit_le910_blacklist},
```
4. Edit qmi_wwan.c source file for the LE910 module:


```
gedit linux-x.x.x/drivers/net/usb/qmi_wwan.c
```
5. Add the following line to `usb_device_id products[]` structure:


```
{QMI_FIXED_INTF(0x1bc7, 0x1201,2)], /*Telit LE910*/
```
6. Compile the drivers.
 - a. `cd linux-x.x.x`
 - b. `make menuconfig`
If a menu window was not made. Install ncurses library.
 - `apt-get install libncurses5`
 - `apt-get install libncurses5-dev`
 - c. Go to **Device Drivers/USB Support/USB Serial Converter Support**.
To go to the menu configuration page, highlight your selection, highlight Select on the bottom of the page, and press Enter.
 - d. Choose **USB driver for GSM and CDMA modems** and press the **M** key to make as a module.
 - e. Go to **Device Drivers/Network Device Support/USB Network Adapters**.
 - f. Choose the appropriate driver and press **M**.
 - g. Exit out of the menus until prompted, **Do you wish to save your new configuration?** Select **Yes**.
To exit a menu, highlight Exit on the bottom of the page, and press Enter.
7. Start building the kernel. This process may take several hours.
 - a. `make`
 - b. `make modules`
 - c. `make modules_install`

8. Install the new kernel: **make install**
9. Reboot the system: **reboot**
10. Verify that the installed kernel version matches the version you downloaded: **uname -r**

Downloading the Windows USB Driver

If you haven't downloaded the driver:

1. Go to the following MultiTech web page. Your product's model number is on the product label.
2. In the Software, Firmware, & Drivers section, click **Download** to download the Windows USB Driver and save the driver to your computer.
3. Extract the files to your computer.

Installing on Windows 10, 8.1, 8, or 7

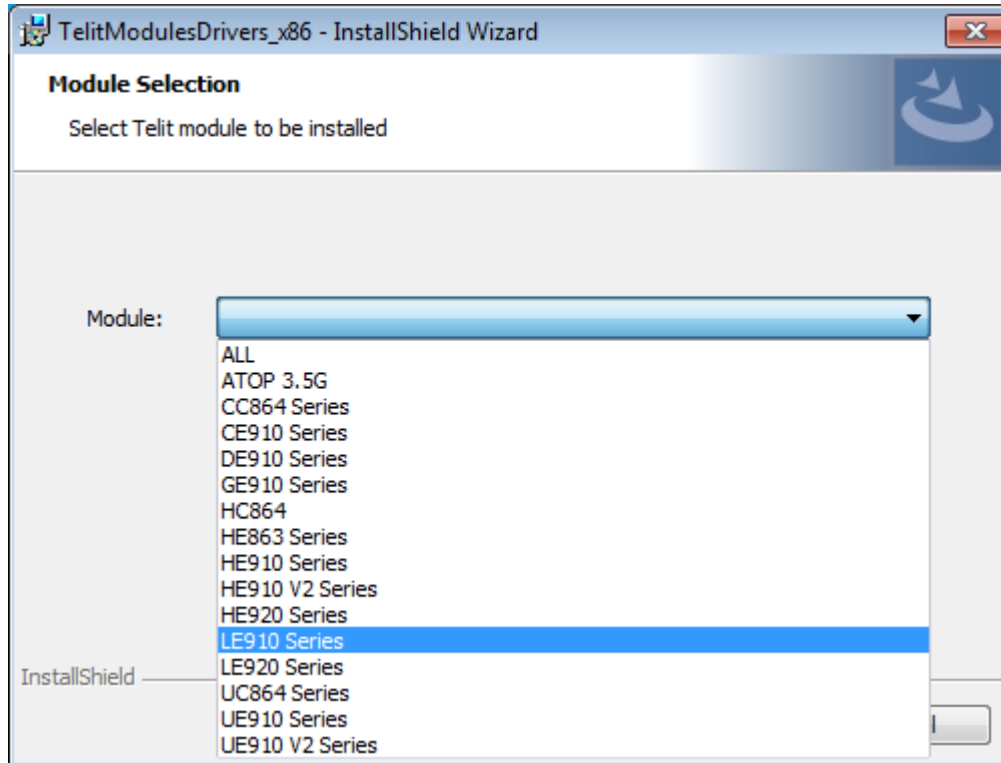
This process installs multiple drivers and ports.

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 double-click on file for your system:
 - For 32-bit use **TelitModulesDriver_x86 (32 bit).msi**
 - For 64-bit use **TelitModulesDriver_x64 (64 bit).msi**
2. Click **Next** in the Welcome pane.
3. Select the model from the Module Selection pane and click **Next**.
 - a. For LAT1/LEU1/LVW2 devices, select **LE910 Series**.
 - b. For LAT3/LVW3 devices, select **All**.



4. Leave the default **Complete (suggested)** Setup Type and click **Next**.
5. Click **Install** each time you are prompted. With Windows 7, you may also need click **Yes** once to allow the install.
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.

Windows 10

To uninstall drivers from Windows 10:

1. Open the Start Menu and click **Settings**.
2. Click **Systems**.
3. Click **Apps & Features**.
4. Uninstall all **Telit modems, ports, and USB drivers**.

Windows 8

To uninstall drivers from Windows 8:

1. Open Windows **Programs and Features**.
2. Uninstall all **Telit modems, ports, and USB drivers**.

Windows 7

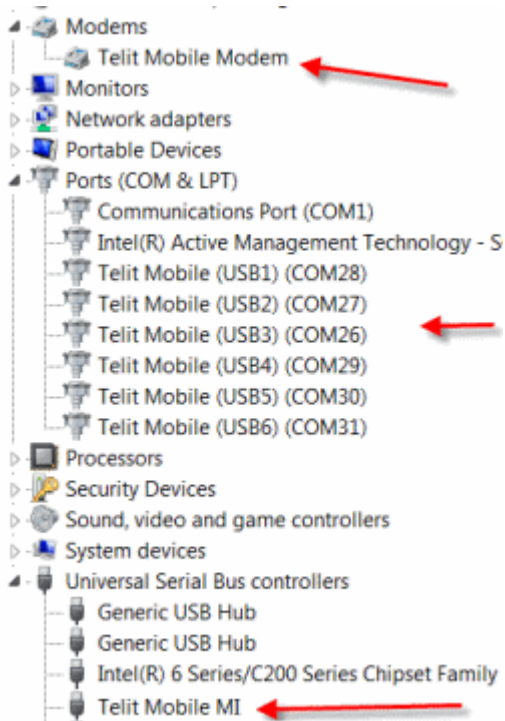
To uninstall drivers from Windows 7:

1. Open **Programs and Features** from the Windows Control Panel.
2. Uninstall the **Windows Driver Package – Telit Wireless Solutions (telitusbser) Modem**.
3. Uninstall all **Telit modems, ports, and USB**.

Remove Microsoft Installed Drivers

If using Windows 7 and connect the device before installing drivers, Windows Update automatically installs drivers. Your device may not operate correctly with these drivers. To remove these drivers:

1. With the device plugged in, open the **Device Manager**.



2. Right-click on the Telit Mobile Modem and select **Uninstall**.
3. Select **Delete the driver software for this device** and click **OK**.
4. Repeat the removal steps to uninstall each Telit port and the Telit Universal Serial Bus Control.