

USB Tethering Configuration

Introduction

This document will cover the step by step instructions for configuring USB Tethering on the EnSURE™ Touch. It will also cover the requirements and troubleshooting steps.

Overview

EnSURE Touch needs an internet connection to communicate with SureTrend Cloud. Most customers will use the Wi-Fi features of EnSURE Touch. In some cases, Wi-Fi is not available or acceptable. EnSURE Touch can be connected to a Windows 10 computer using the USB cable that comes with EnSURE Touch and share the internet connection of the Windows 10 computer.



Windows 10 Computer with
Internet Connection Sharing
(ICS) Configured

Requirements

1. Windows 10 computer with an internet connection and an EnSURE Touch.
2. Permissions to install Windows 10 RNDIS6 driver.

3. Permissions to configure Windows Internet Connection Sharing (ICS).
4. USB Cable that comes with the EnSURE Touch.
5. Windows 10 knowledge and ability to navigate to Device Manager and Windows Network Connections.

Limitations

The following are the limitations:

1. Only one EnSURE Touch can be connected at a time. You can configure multiple instruments on one computer, but only one can be connected at a time.
2. Once configured, disconnecting the EnSURE Touch will remove the network adapter from Windows 10. Reconnecting the EnSURE Touch to the Windows 10 computer will reestablish the network adapter and ICS setting, but there is a short delay. The delay is about 30 seconds depending on the computer. Attempting to Sync or perform any network functions during this delay will result in failure. The failure can be dismissed.
3. USB Tethering has not been tested on every Windows 10 computer. Success is dependent on the Windows 10 computer ability to support the network adapter driver and ICS configuration.
4. Windows 10 computer BIOS, drivers, and Windows updates may be required.
5. 3rd party software firewalls may block ICS.
6. TeamViewer support does not work with USB Tethering

Configuration Steps

The following are the steps to enable USB Tethering. Each EnSURE Touch has a unique serial number that is bound to the Windows RNDIS driver. This means the Windows steps below must be done for each EnSURE Touch that will be connected to this computer. Once the configuration is complete, disconnecting and reconnecting the EnSURE Touch will reestablish the network adapter ICS settings. This typically takes less than 30 seconds.

Summary of Steps

1. Connect EnSURE Touch to the Windows 10 computer using the USB cable.
2. Turn on EnSURE Touch.
3. Enable USB Tethering on EnSURE Touch. This will fail the first time. Leave the error on display and proceed to Windows 10 computer setup.
4. Install the Windows 10 RNDIS6 driver.
5. Configure Windows Internet Connection Sharing (ICS).
6. Restart EnSURE Touch.

On the EnSURE Touch USB Tethering screen use the Check Connection button to verify connectivity to the internet.

Connect the Ensure Touch

Connect the EnSURE Touch using the USB cable to the Windows 10 computer. This can power the EnSURE Touch while connecting it to the internet.

Turn On Ensure Touch

Turn on EnSURE Touch. If EnSURE Touch is already powered on that is okay. If it is in sleep mode wake it up by pressing the power button like you would on your phone. If you long-hold the power button it will turn off.

Enable USB Tethering

Navigate to Setting->General->USB Tethering on the EnSURE Touch. The use the Enable toggle to turn on USB Tethering.

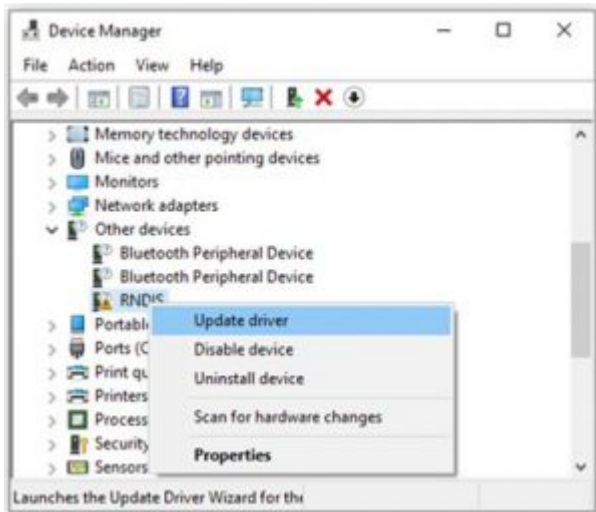


Install the Windows 10 RNDIS Driver

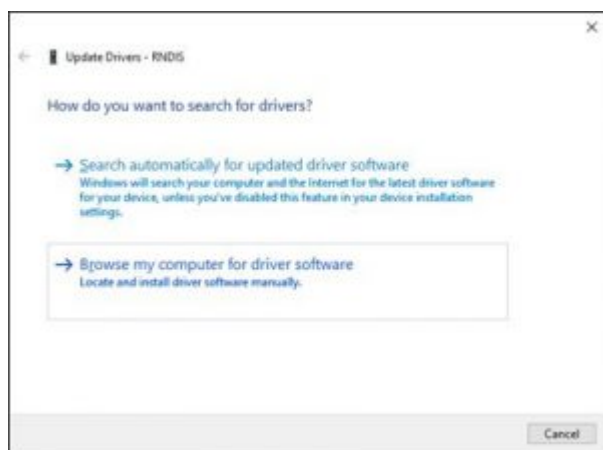
Once the EnSURE Touch is powered on and USB Tethering is enabled, the EnSURE Touch should create an entry in Windows Device Manager as an unknown RNDIS device. You will need Windows 10 permissions to accomplish the following steps.



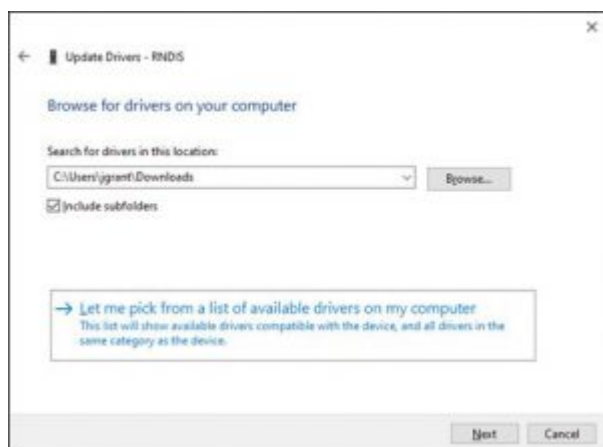
Right-click on the RNDIS entry in Device Manager and select Update driver.



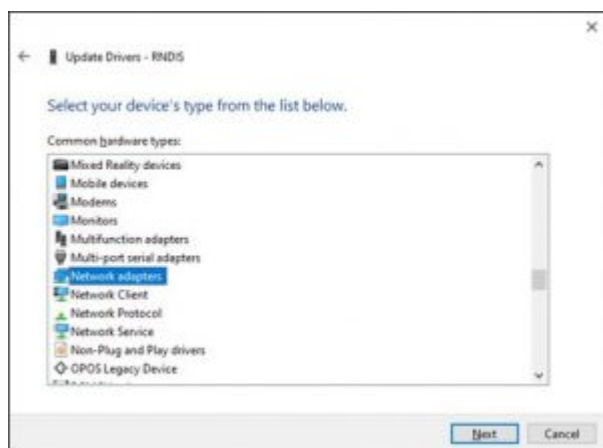
Select Browse my computer for driver software. A generic RNDIS driver is included with Windows 10 and is located on the computer.



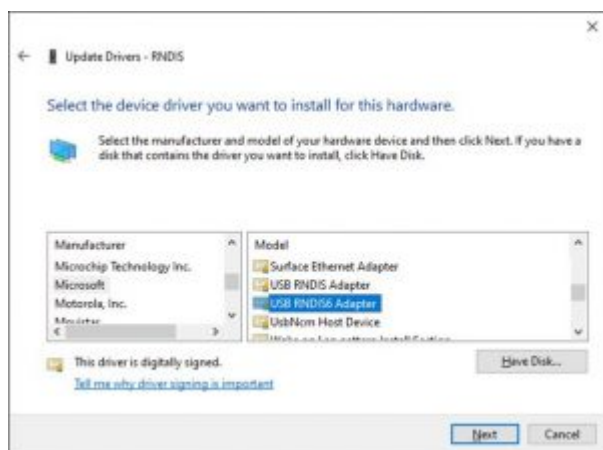
Select Let me pick from a list of available drivers on my computer and press the Next button.



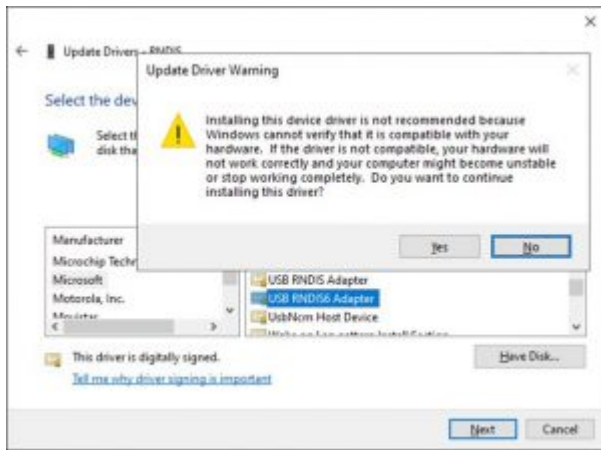
Select the Network adapters from the list of Common hardware types and press the Next button.



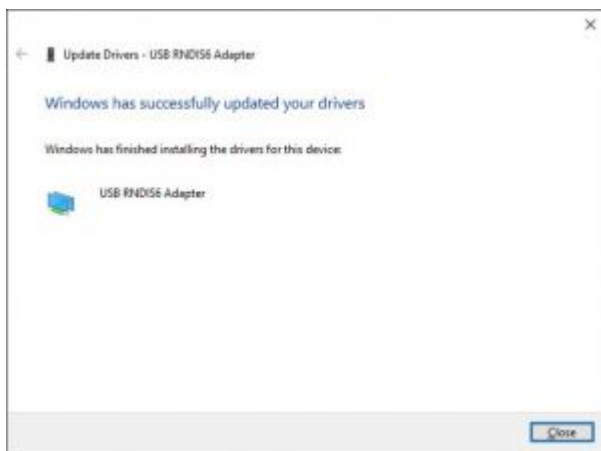
Select Microsoft from the list of manufactures, and USB RNDIS6 Adapter from the Model. It is important to get the correct RNDIS driver. There are older versions that may work but have not been tested.



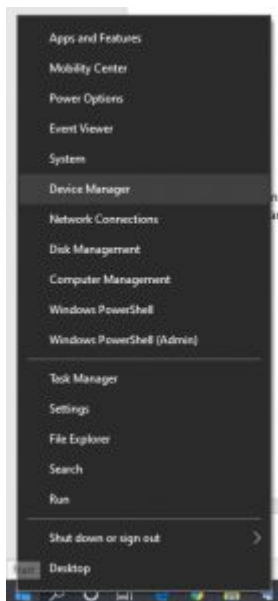
Press the Yes button to the warning message below. If you do not respond by pressing the Yes button the driver will not install. If the driver causes any issues with the Windows 10 computer it can be removed.

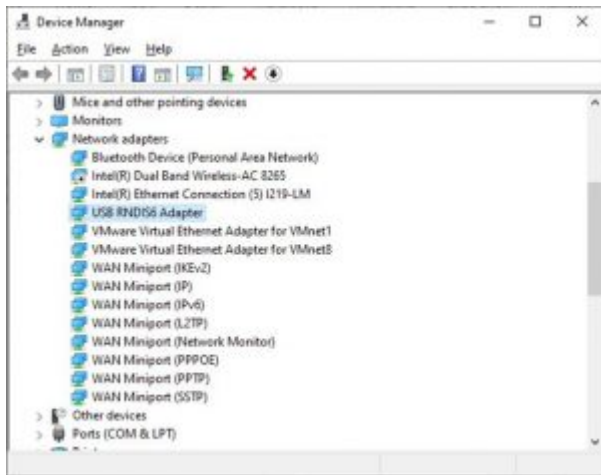


The following message box will appear when the driver is successfully installed.

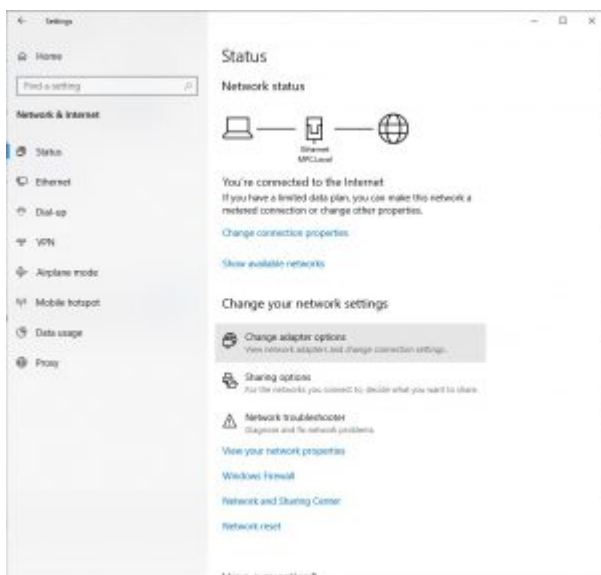


To confirm the installation, you should now see the Network adapter in Device Manager. To launch Device Manager Right Click the mouse on the Start button and select Device Manager from the menu.

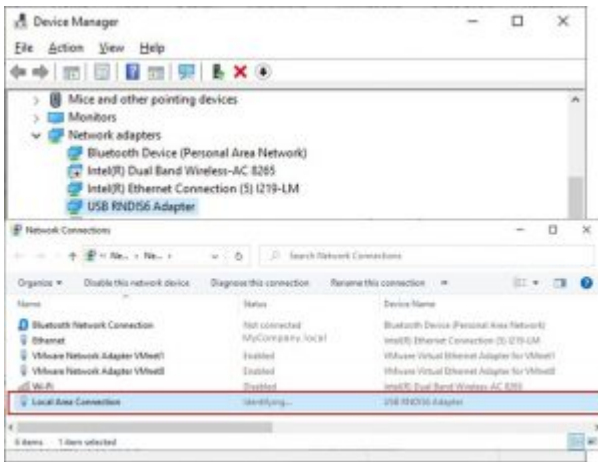




Navigate to the Windows Network Connections. Use the Network troubleshooter. Select Start > Settings > Change adapter options.

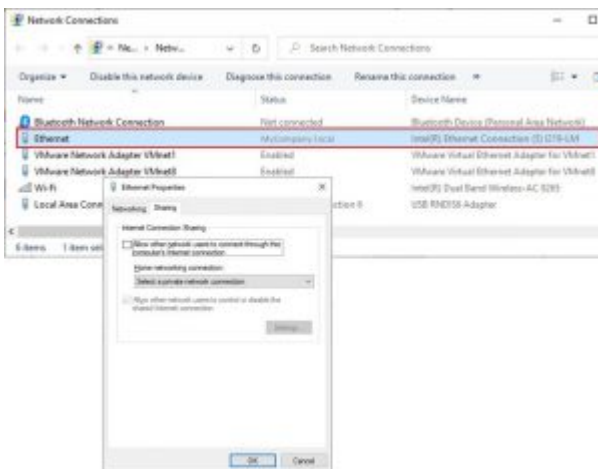


You should see a new network connection indicated below. Since ICS has not been enabled it will stay in the “identifying...” status.

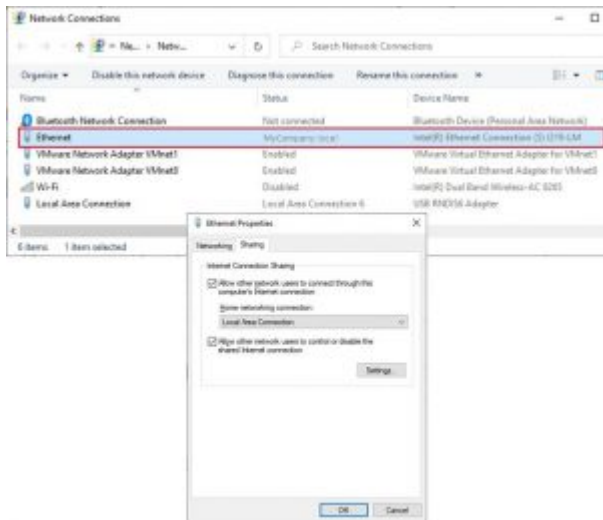


Configure Internet Connection Sharing (ICS)

Locate the network connection of the Windows 10 computer that is used for internet access. Right-click on the entry and select properties, then select the Sharing tab. On this dialog, you can enable ICS and select the network adapter to share the internet connection with.



When complete the two networks should have ICS enabled and the shared network should show Sharing in the status.



Restart EnSURE Touch

Press and hold the power button until the power menu appears. Select Restart from the menu. This should restart EnSURE Touch and USB Tethering should be enabled, and ICS should be configured.

Check Connection

On EnSure Touch, go to General>USB Tethering. When the USB Tethering screen is enabled and has obtained an IP address it will have a Check Connection button. This button is useful for testing the configuration. Also, the screen should display the internal networking details including IP address, Subnet mask, Default Gateway, and DNS server.

Troubleshooting

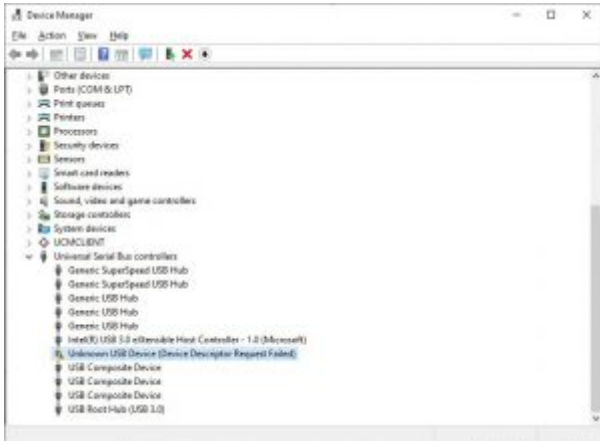
The following are some known conditions and how to resolve them.

If the RNDIS driver does not appear in Device Manager

If the EnSURE Touch shows in device manager as Unknown USB Device that typically means the cable is not communicating with the Windows 10 computer. The connectors are not making contact or the wires in the cable have failed. The cable can potential still charge or power the EnSURE Touch, but communication is failing.

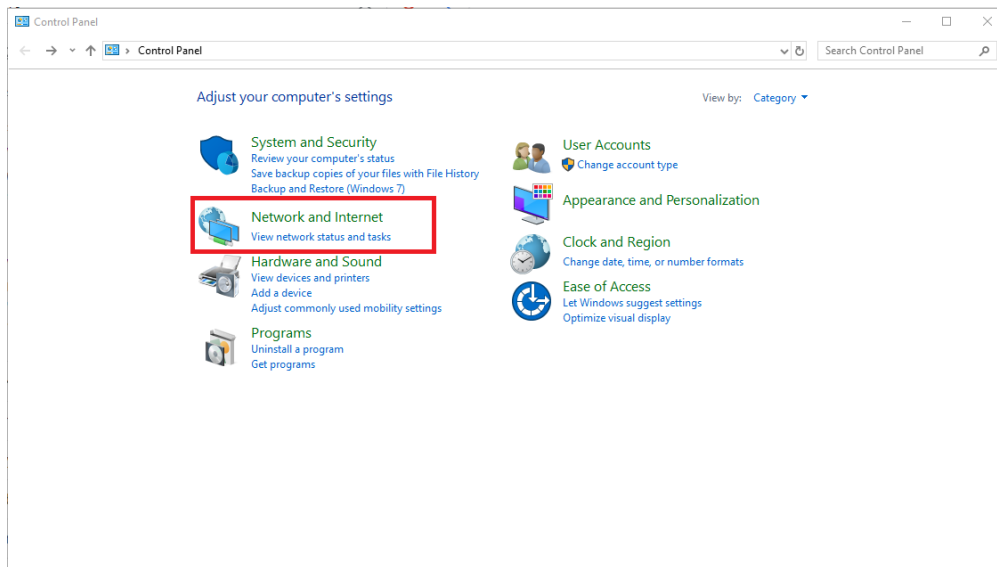
Solution

Replace the cable.

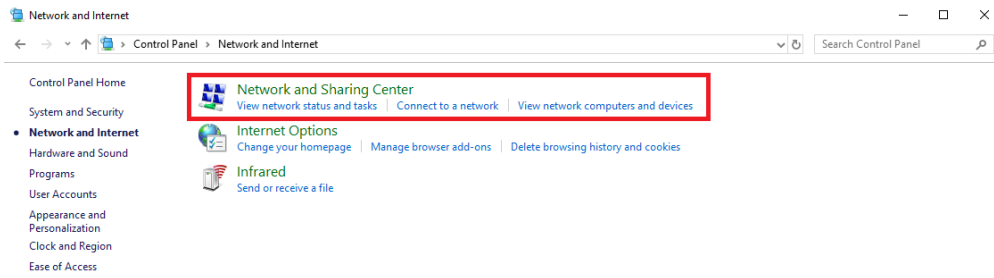


How to Prevent the network adapter from going to sleep.

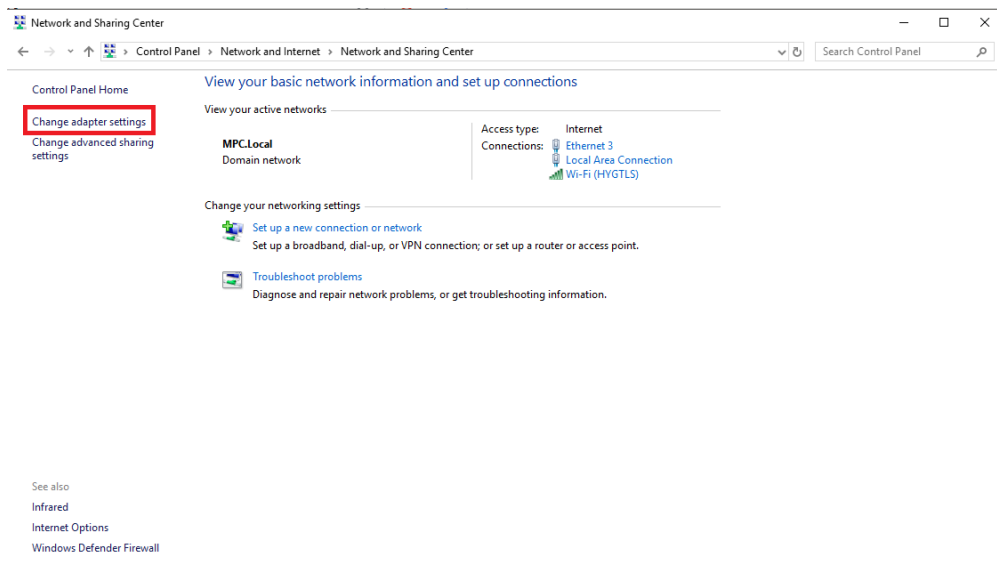
1. Navigate to Control Panel.



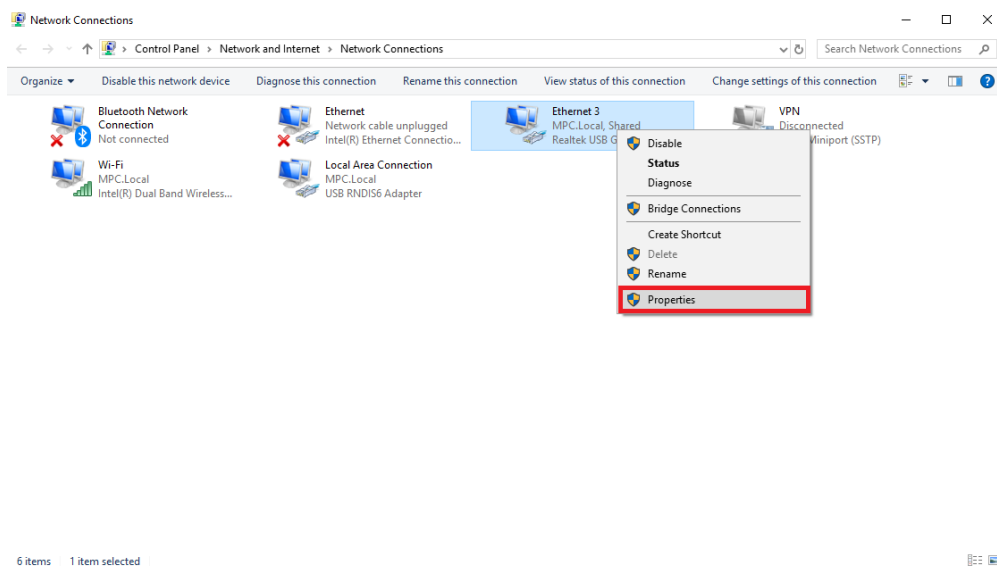
2. Select Network and Sharing Center.



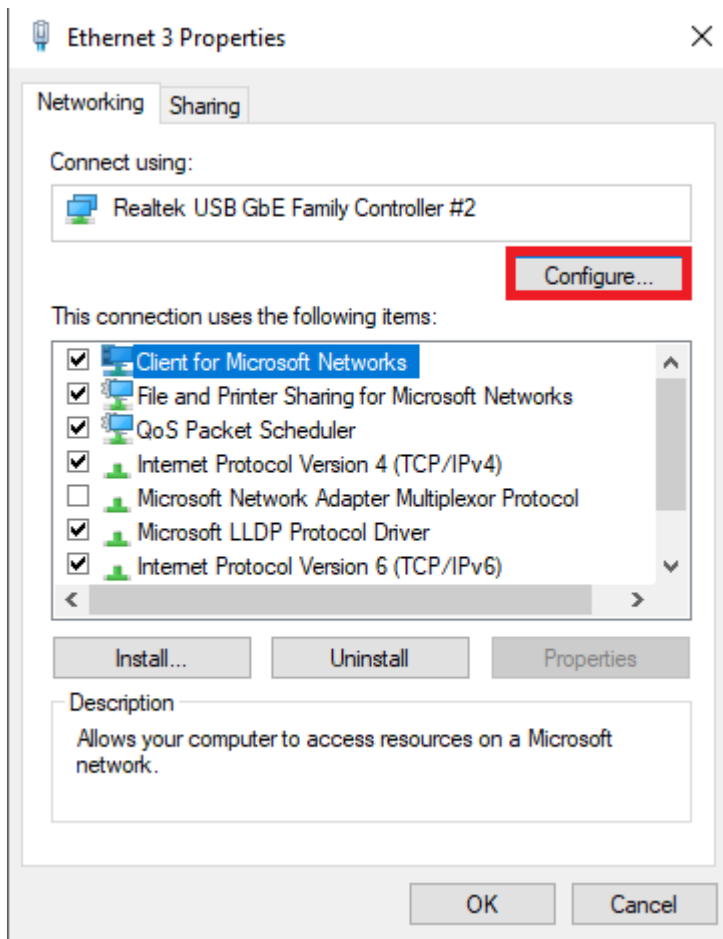
3. Select Change adapter settings.



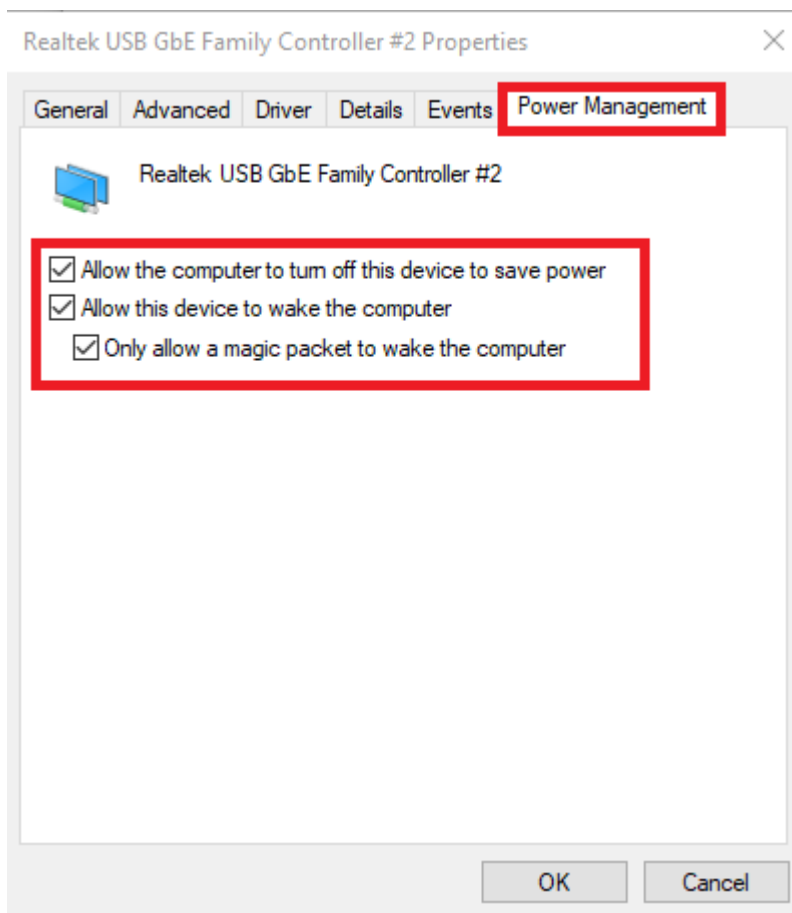
4. Select your Shared Network Connection, and select properties.



5. Select Configure.



6. Enable allow this device to wake the computer.



7. Select OK.