# User Manual

# nanoBT

*Revision 1a*

# Contents

# Overview and Installation

## Overview

The nanoBT is a Bluetooth communication module that allows the labZY devices to connect directly to a computer. The nanoBT module weighs 10 g and has dimensions approximately 50x25x7 $mm^3$. A 15cm cable with USB mini B connector is attached to the module. . Fig. 1.1 shows the nanoBT seen from the label side of the module. The label displays the part number (NA0520) and the 6 digit serial number of the module.

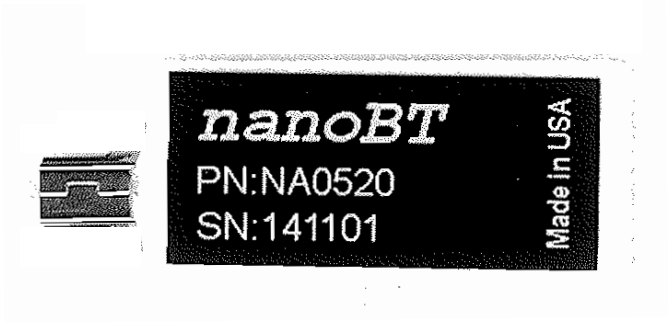
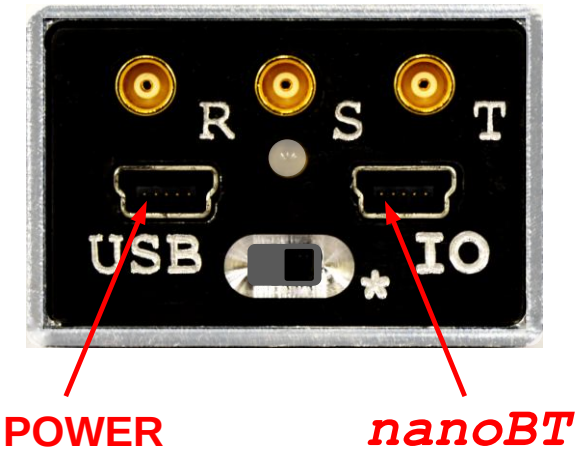



Figure 1.1 nanoBT module, label side.

The nanoBT is designed to work with labZY devices with firmware versions greater than 30 and having an even last digit. For example nanoBT will work fine with firmware versions 30.20 or 50.22 but will not work with versions 30.19 or 40.15.

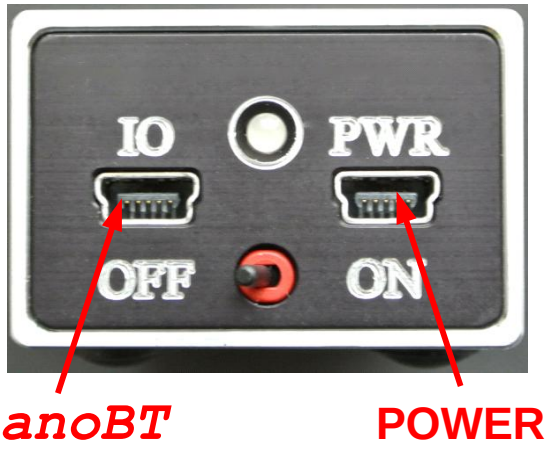
## Hardware Installation

The nanoBT must be connected to the IO ports of the labZY devices. The labZY devices must be powered by external power supply delivering enough current to power both the labZY device and the attached nanoBT module. Fig. 1.2 shows the IO port and the port to connect external power ( POWER) of different labZY devices. Note that the external power to nanoPSD and nanoTDCR is supplied through the USB port, while for the other devices the external power is supplied through a dedicated port. **In the later case it is IMPORTANT that the external power is NOT APPLIED when the IO port is connected to a USB port of a computer!.**




a)


b)




c)

Figure 1.2 IO port and the POWER connector; a) nanoPSD and nanoTDCR, b) nanoMCA-II (SP), c) nanoMCA (SP), nanoXRS, and nanoDPP

To connect physically the nanoBT module to  nanoPSD or nanoTDCR an extension cable is required. It is als recommended to use extension cables with other devices as this places the nanoBT on a distance from the labZY device reducing any possible electromagnetic interference. In the following description a connection via extension cable is considered.

Follow these steps to connect the nanoBT to labZY device.

1. If the labZY device is powered, turn it off either using the power switch or unplugging the cable supplying power (e.g. USB cable).

2. Plug the nanoBT to the female end of the extension cable.

3. Plug the other end of the extension cable into the labZY device.

4. Apply power to the labZY device using an external power supply.

Upon powering the nanoBT module on the side opposite to the label side a blue Link LED light begins blinking indicating that the nanoBT is not connected to a host computer ( Fig. 1.3).

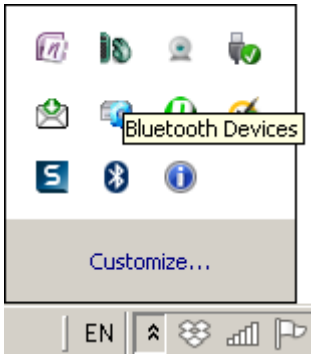
Figure 1.3 Link LED.

The nanoBT module is shipped ready to be connected to a computer with Windows operating system. Depending on the Windows version and the Bluetooth driver the connection steps may be different.

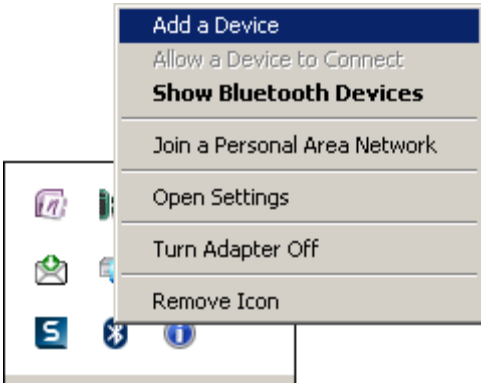
# Computer Connection

## Windows 7

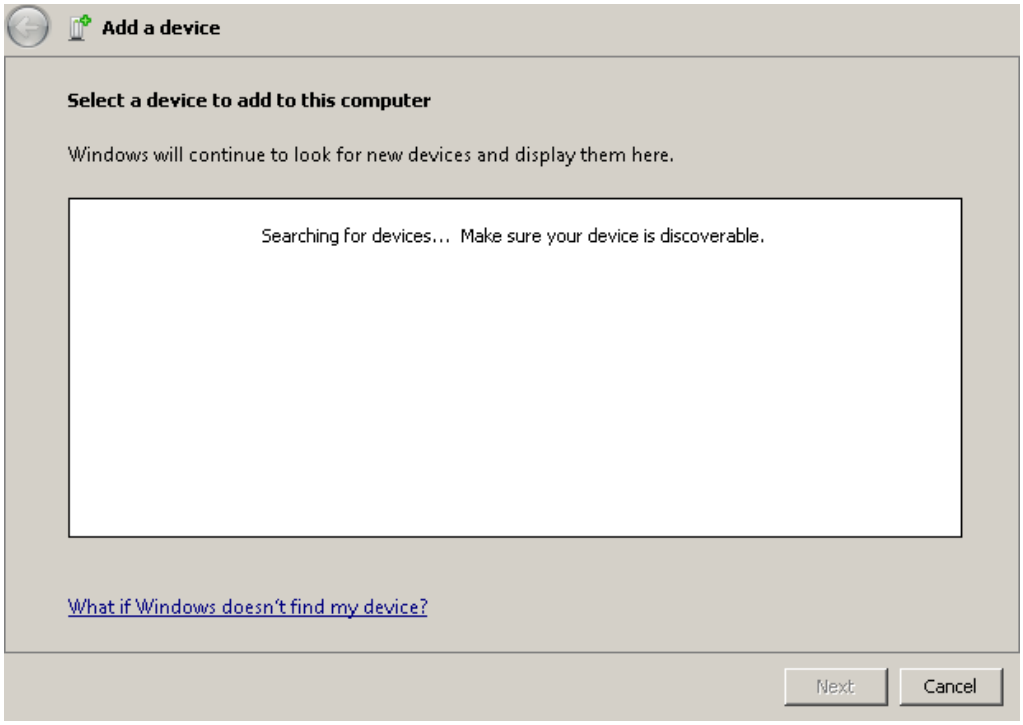
Locate the **Bluetooth Icon** in the task bar and press it.



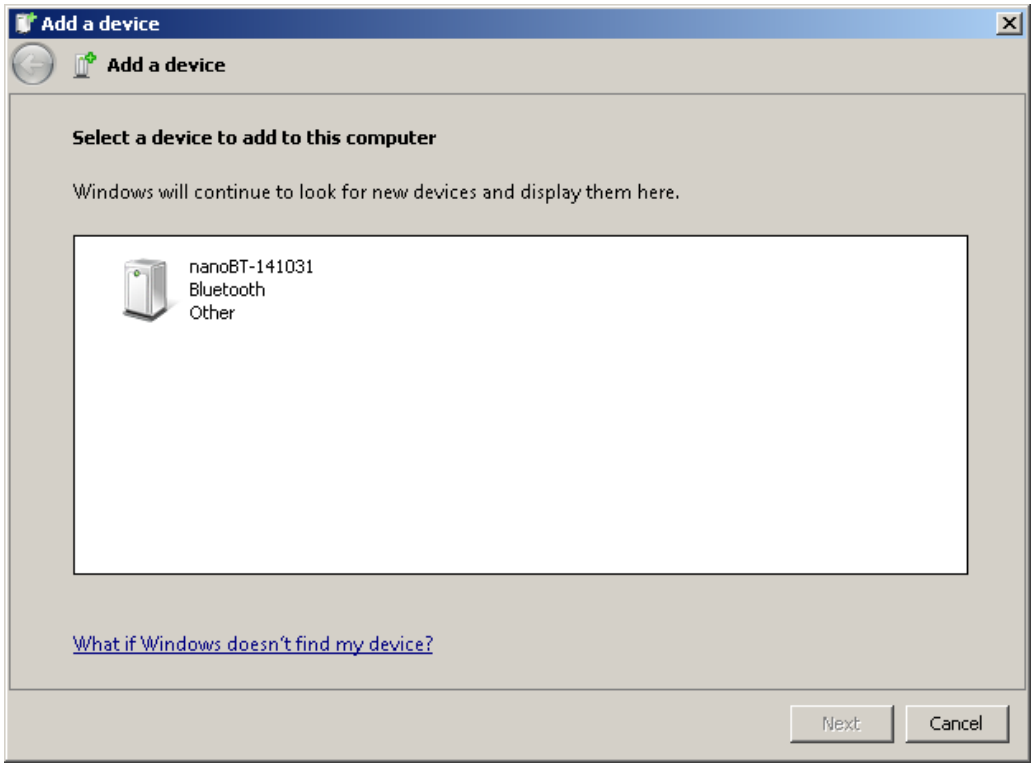

An option window will open. Select **Add a Device**.



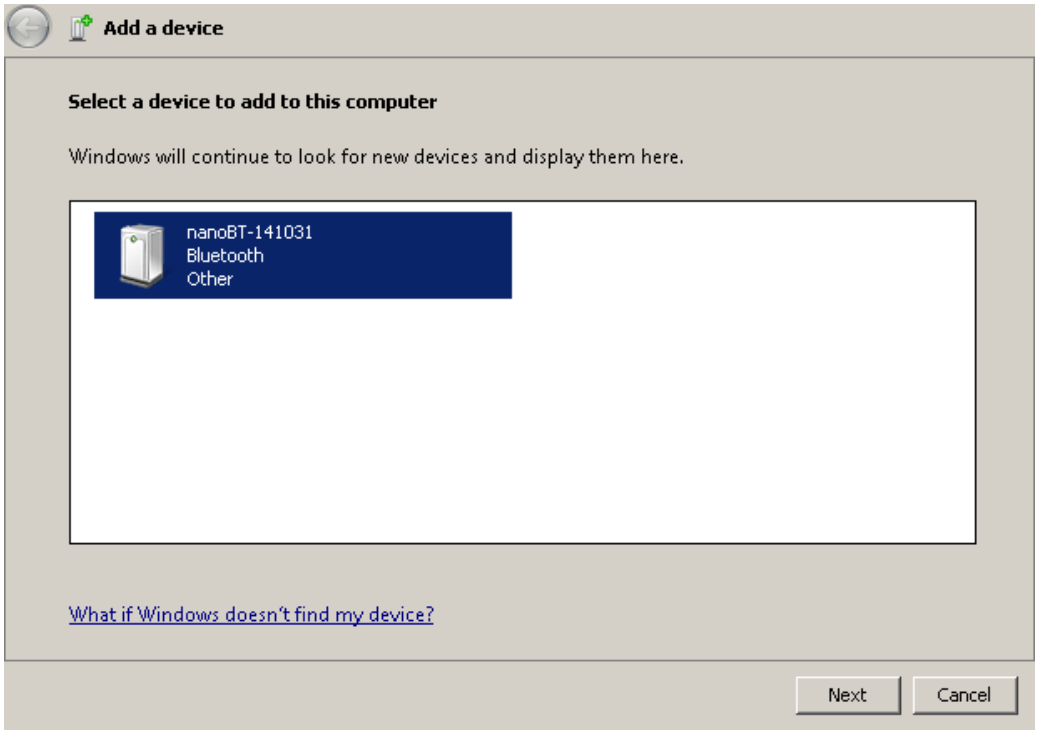
The add Device will be displayed with a message "Searching for devices..."



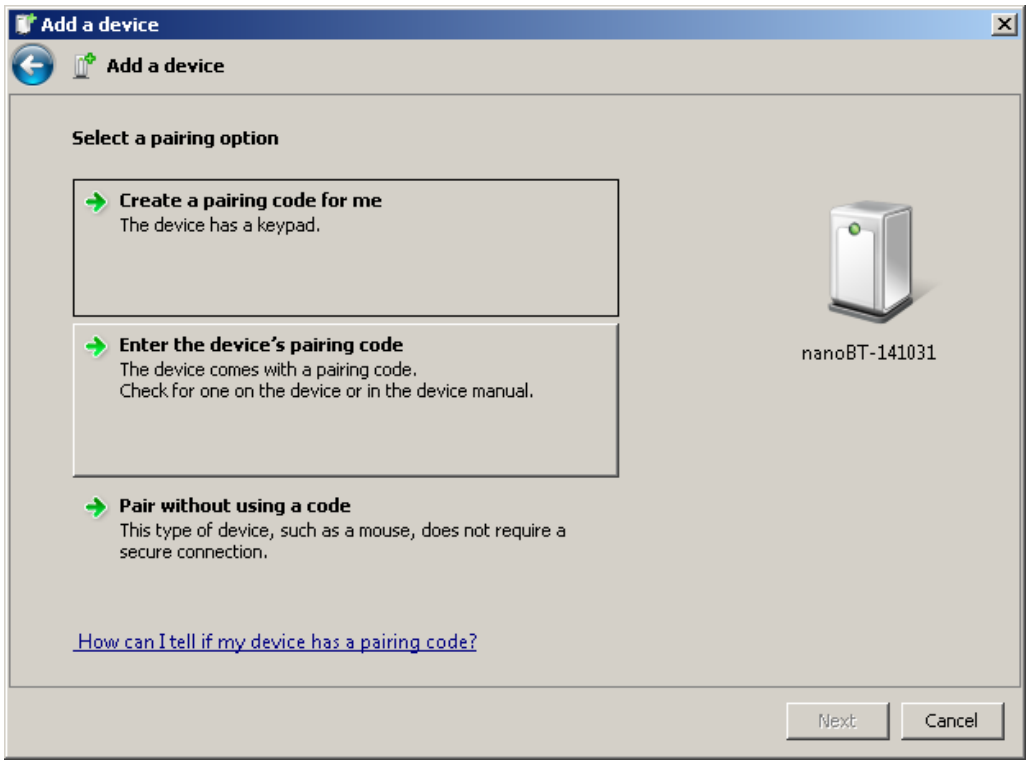

If the nanoBT is found it will be identified as nanoBT-XXXXXX, where XXXXXX is the serial number of the nanoBT module.



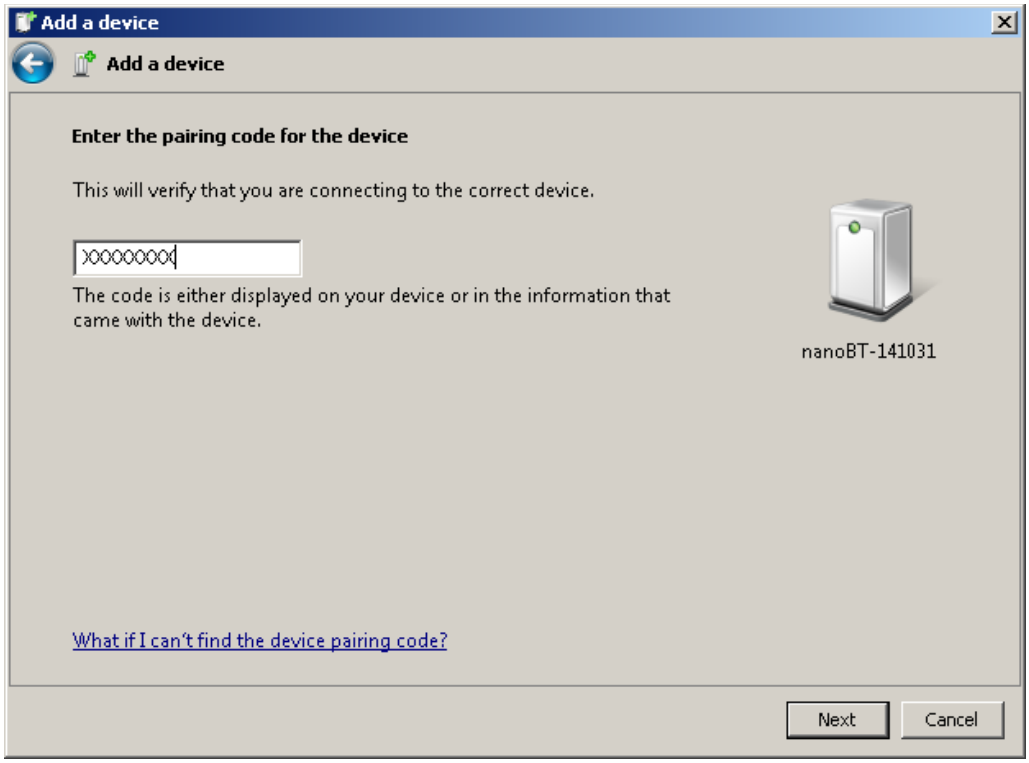
Select the nanoBT module and press the **Next** button.



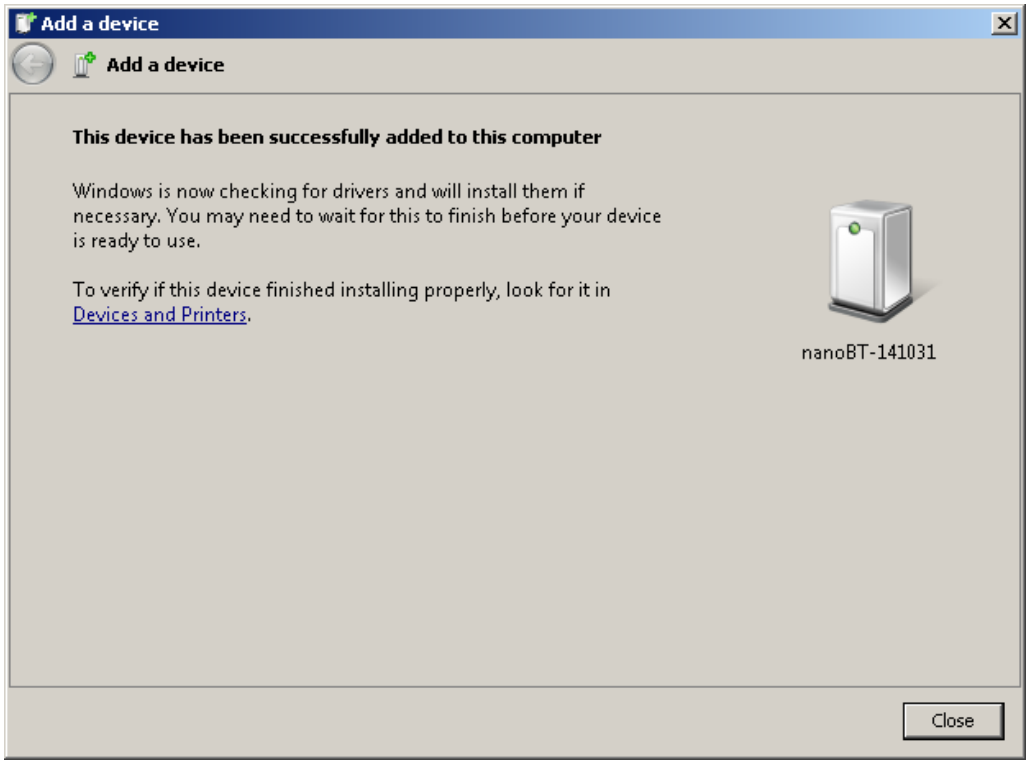

A dialog suggesting pairing options will be displayed. Select **Enter the device's pairing code**. Press the **Next** button.



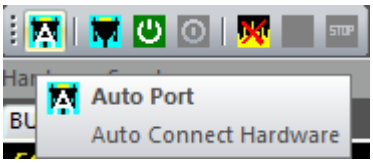
Enter the pairing code  and press the **Next** button.



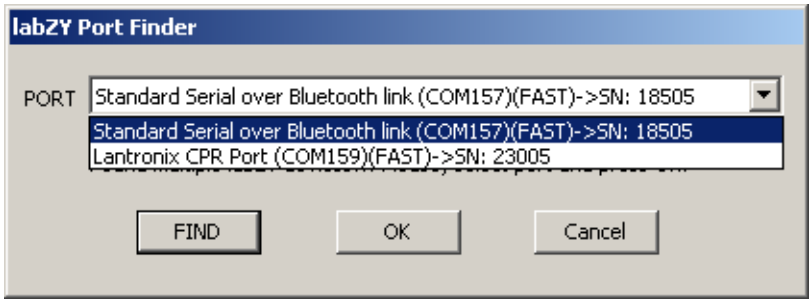

Upon successful pairing a confirmation dialog will appear confirming the addition of the nanoBT module.



When the nanoBT is added to the computer two COM ports will be created. These ports are dedicated to the added nanoBT module. To find the nanoBT COM port that is used to communicate with labZY devices start a labZY software application (labZY-MCA, labZY-PSD, labZY-TDCR). and start the automatic port finding routine.



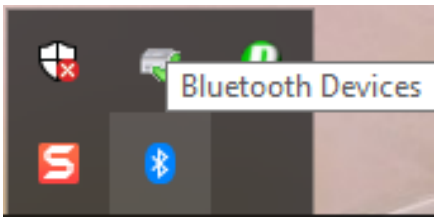

If the nanoBT COM port is the only found the labZY software application automatically connects to the port. If more than one ports are found a list of devices is displayed. Select the device connected to the nanoBT (Bluetooth Link) and press the OK button.

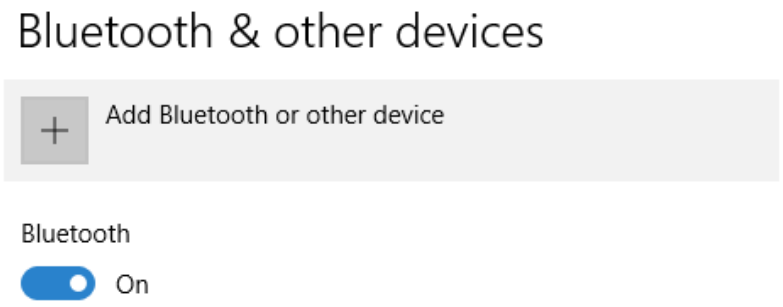


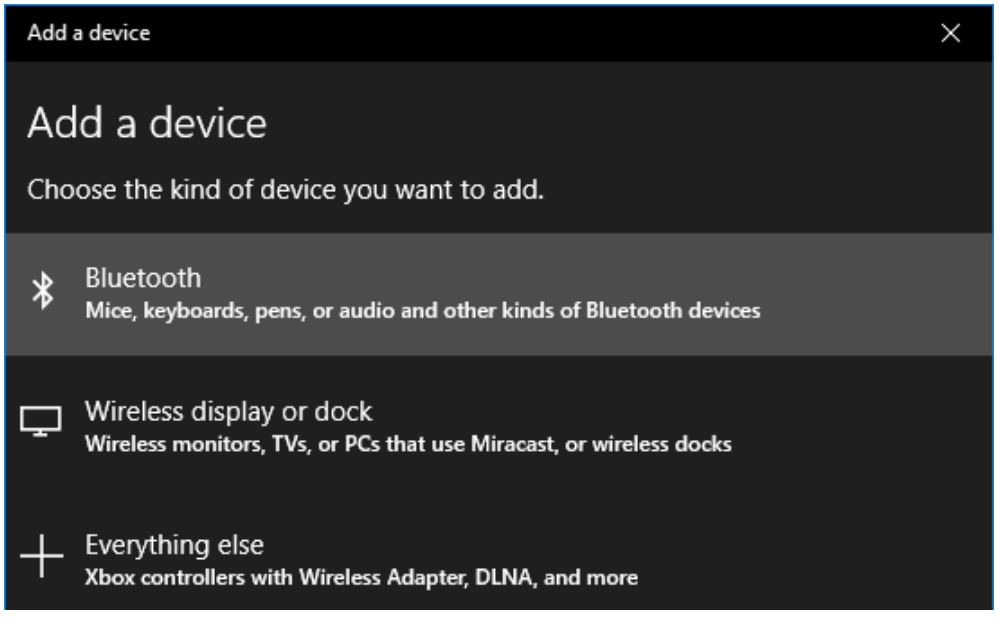

When the nanoBT module is linked to labZY software application the blue Link LED light stops blinking and becomes steady.

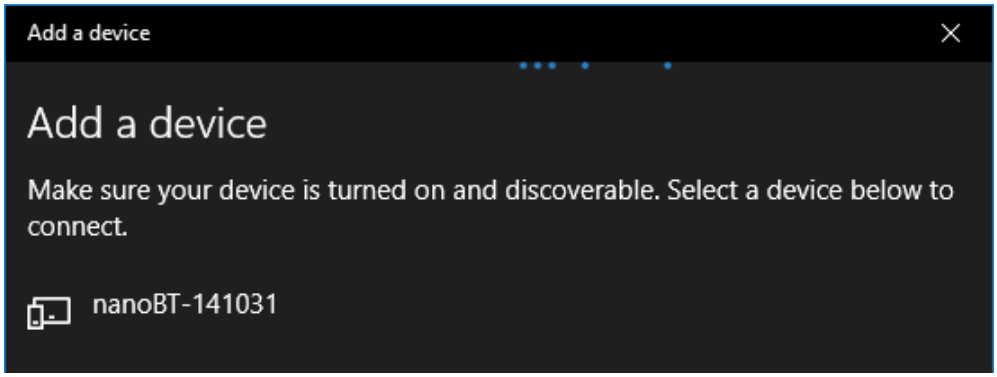
## Windows 10

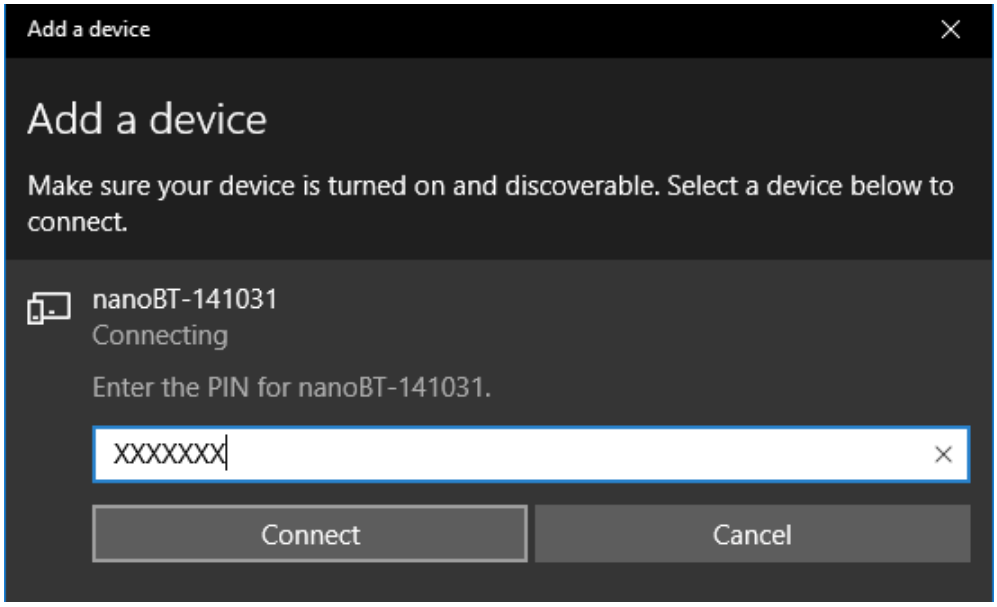
The steps to add the nanoBT to Windows 10 are similar to the steps of Windows 7. The following images  are self explanatory and ilustrates the process of adding nanoBT to windows 10.

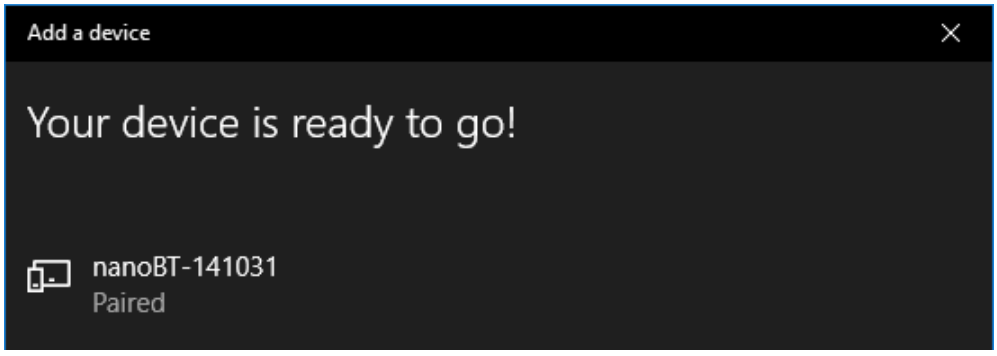





*If you need help, please, contact support@labzy.com.*

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