# Tutorial 1: Quick Start Guide

The MovSens wireless 9DOF IMU board is pre-loaded with a firmware that acquires accelerations, rotation rates and magnetic field strength along 3 axis's, and streams the data in real time. Following the steps below and you can have the first hand-on experience of how the wireless IMU board measures and transmits inertial signals remotely without wires.

1. Set up a pair of XBee modules for wireless data transmission. Set the baud rates for both XBee modules to 9600. You can buy the XBee Serial 1 module from Here, and buy the XBee Explorer Dongle from Here. If you need help in setting up XBee transceivers, please go to the XBee product page: Here;

2. Insert one XBee into Wireless MovSens 9DOF IMU board (please pay attention to the direction of XBee on board) and the other one into XBee Explorer Dongle.
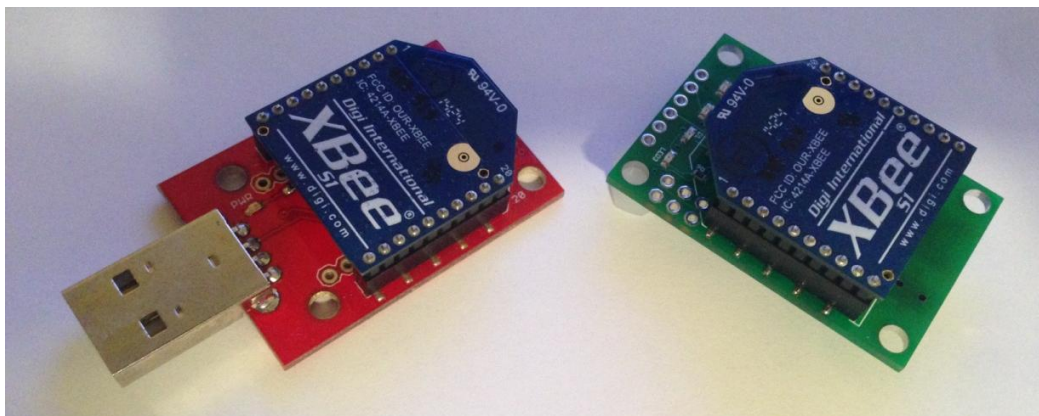
3. Connect a Lithium Polymer Battery (Get it Here) to the IMU board, and insert the XBee Explorer Dongle to the USB port of your computer;
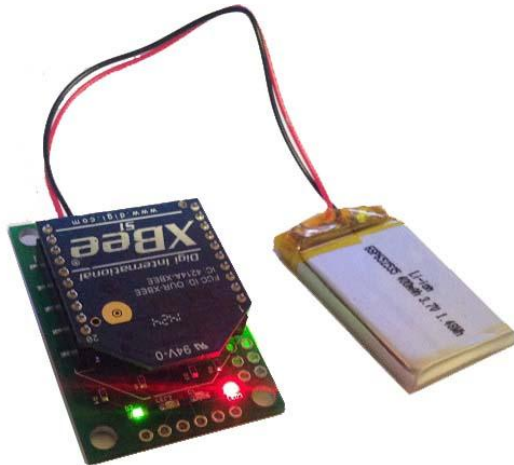

4. Turn on your wireless IMU board. At this point, the IMU board and the XBee Explorer Dongle form a point-to-point wireless sensor network. The data is transmitted wirelessly between them. Till now, your hardware is all set. Next, you will use Arduino or any serial terminal to view your data;

5. Open Arduino software and select the right port (Download from Here). Tip: To know which port your XBee is, you can unplug and plug the XBee Explorer Dongle and see which port number in the list disappears and reappears.

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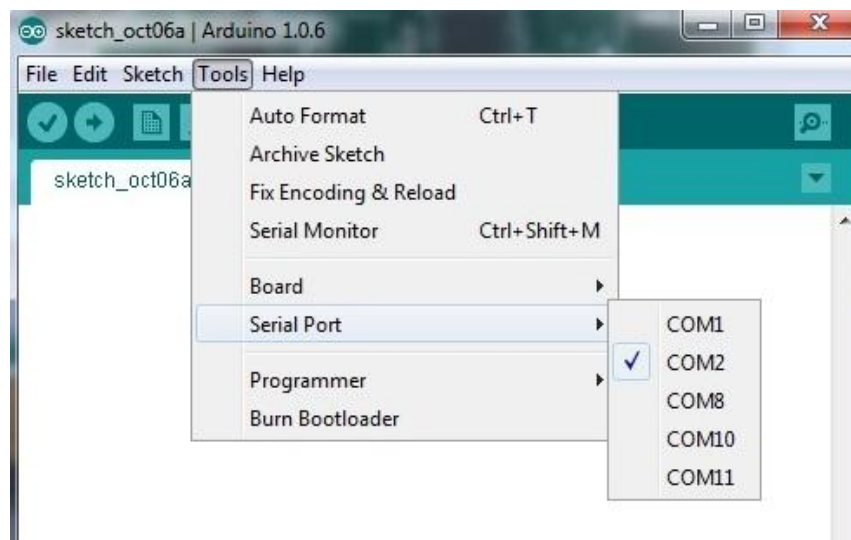
6. Click Tool >> Serial Monitor, the serial monitor window will pop up. Select the baud rate of 9600 at the bottom right of the Serial Monitor window, and you will see 9DOF data streaming out. That's your data!
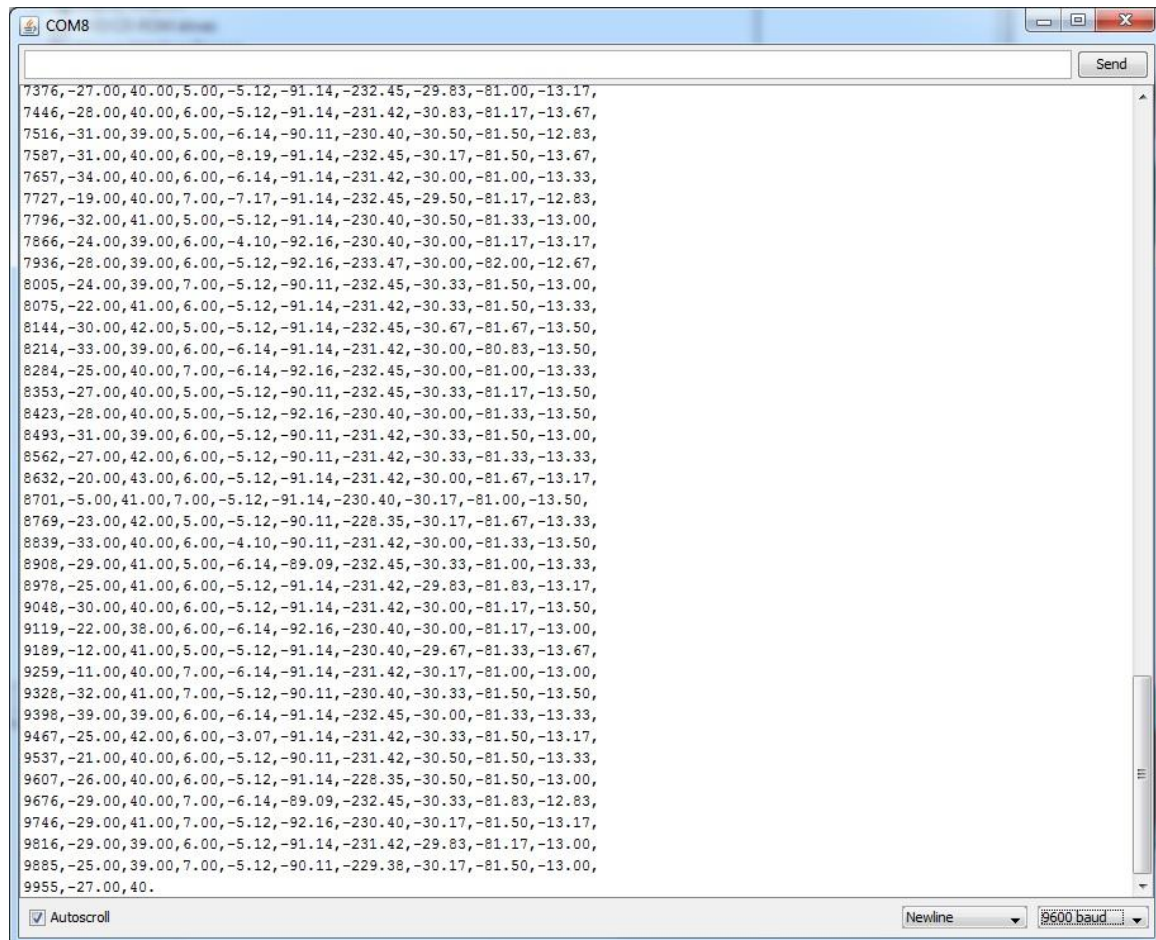
7. The data includes the time stamp (millisecond), 3 rotation rates, 3 accelerations, and 3 magnetic field strength. Turn the IMU board around to find out which data is which. After you understand the data, you can use Wireless MovSens 9DOF IMU for your own applications.