

# IG Devices Development Kit Quick Start Guide



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*Following instructions will help you to start quickly with your new IG Device. Please read and follow it carefully before plugging the device or installing software.*

## Content of a Development Kit

- A USB to Uart, or interface, or USB to CAN interface with associated cable and power supply,
- This quick start guide,
- A set of compatible screws,
- A USB Key containing:
  - USB interface drivers,
  - sbgCenter analysis tool,
  - sbgUpdater and sbgFirmwareUpdater tools,
  - sbgCom and sbgCan C libraries,
  - Matlab and Labview plug-ins,
  - Source code examples in C, Matlab and Labview,
  - Full documentation:
    - Your IG-Device User Manual,
    - Serial and CAN Protocol Specifications,
    - IG-Devices OEM integration manual,
    - sbgCom and sbgCan Libraries documentations,
    - Magnetometers Calibration Tool,
    - sbgCenter User Manual.

## Software Development Kit (SDK) Installation

- **DO NOT** connect the USB to serial or USB to CAN interface to your computer,
- Insert the USB Key and launch the Installer,
- Follow the wizard instructions.




Once installation is done, you can plug the USB interface to the computer.

## First try with sbgCenter

Once software and drivers are installed, you can launch the sbgCenter for the first use of the device. Serial products owners should directly go to the All devices section.

### CAN devices pre-configuration (P3)

Before actually being able to use the sensor, you must configure the sbgCenter properly. These steps have to be performed only once.

1. Connect the sensor to the USB interface, and power up the sensor. Connect the USB interface to the PC.
2. Go into the sbgCenter configuration , and then get into "Devices Options" tab.
3. Select the igCan Plug-in. The Can interface CAN\_0hXX should be listed. Click on the Can interface and finally press "Add Device" button to configure enable IG-Device connection to the sbgCenter. You can now close sbgCenter options window.

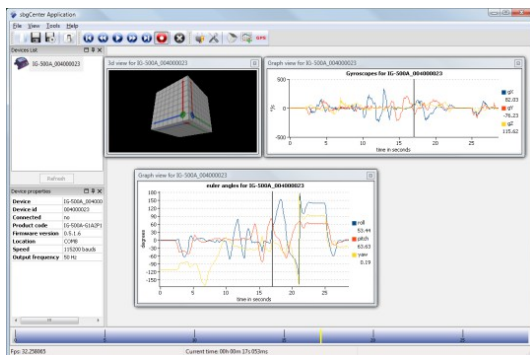
### All devices

1. Connect the USB interface on your computer,
2. Connect the IG device on the USB interface,
3. Launch the sbgCenter,  
[Start menu ⇨ programs ⇨ SBG Systems ⇨ sbgCenter],
4. Click on the « Refresh » button in the Devices List panel,
5. Double-click on the product that appears in the « device list » to connect it,
6. Click on the « 3D Cube » icon to start the 3D display,
7. Now, you can start playing with the sbgCenter!

The sbgCenter will now help you to:

- Visualize real time sensor data as well as orientation, position and velocity
- Make recordings for further analysis,
- Export recordings,
- Configure IG devices
- Calibrate sensors:  
Magnetometers Iron calibration tool or Gyro bias

For more information about the sbgCenter, please read the sbgCenter User Manual.



## Files included in the SDK

Once the SDK is installed, you can find the following helpful files such as the documentation:  
*[Start menu ⇨ programs ⇨ SBG Systems ⇨ IG-500 SDK ⇨ Documentation]*

You will also find Example source codes here:  
*[Start menu ⇨ programs ⇨ SBG Systems ⇨ IG-500 SDK ⇨ Examples]*

## Interfacing the IG Device with your PC or programs

### Use of the C sbgCom and sbgCan libraries

The easiest way to interface an IG devices with C programs is to use the sbgCom or sbgCan library. With simple C functions, you can configure and retrieve the device's outputs very quickly. Libraries source code is provided.

### Interfacing with Matlab or Labview

SBG Systems provides a full Matlab and Labview support through the sbgMatLab and sbgLabView libraries. It is quite easy to configure and get sensors outputs using these two programs.

### Direct Low Level Communication with the IG device

If your system is very specific, you can base your developments on the low level protocol specifications. A serial port or CAN bus is needed for communications. All specifications are described in the "IG Devices Serial Protocol Specifications" and "IG-Devices CAN Protocol Specifications".

You can also refer to the sbgCom low level functions to manage your interface.

## Support

If you have any trouble or question with the use of the IG device, feel free to contact our support team:

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