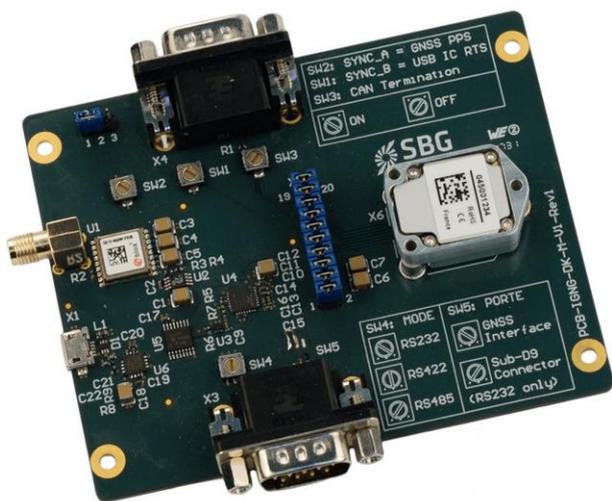


Ellipse Micro AHRS & INS

High perf, Micro Inertial Systems

Quick Start Guide



Document
Revision

ELLIPSEMQSG
Jul 1, 2020

Support

support@sbg-systems.com
+33 1 80 88 43 70

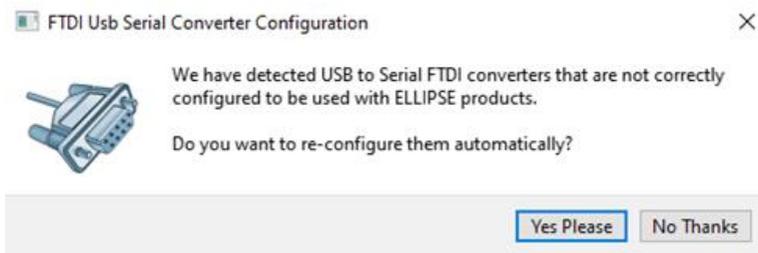
Following instructions will help you to start quickly with your new Ellipse Micro Device.

Content of a development Kit

1. A transport case
2. This quick start guide
3. An evaluation board with USB cable

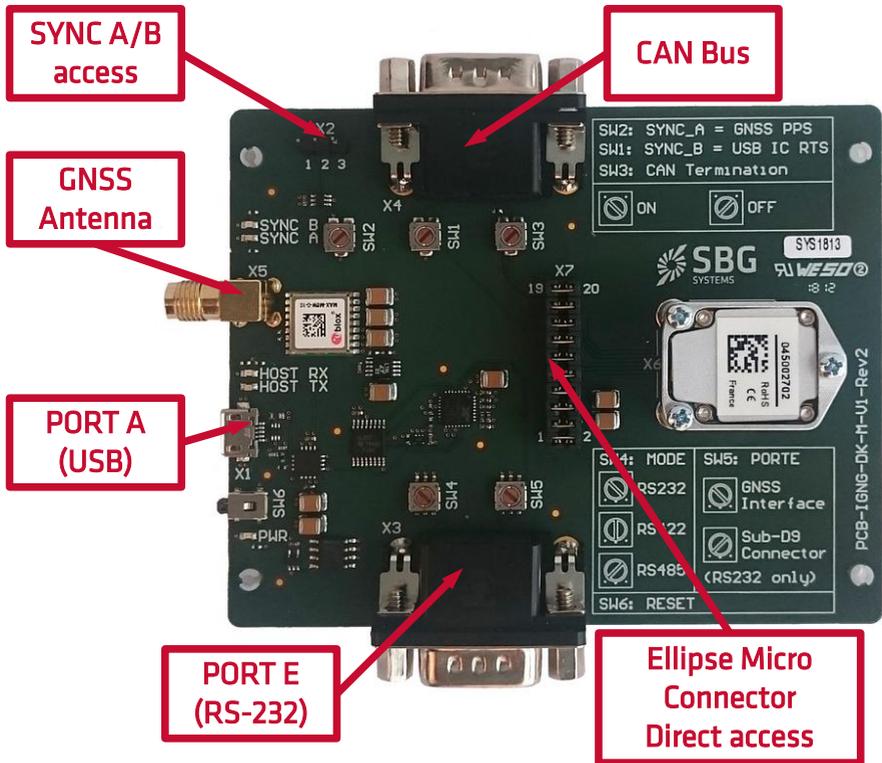
Software Development Kit Installation

1. Download the latest SDK from SBG Systems support website:
<https://www.sbg-systems.com/setup>
2. Launch the Inertial SDK executable.
3. Follow the instructions.
4. Once Inertial SDK is installed, you can plug the USB cable on your computer with Ellipse connected to it.
5. When you first launch sbgCenter application and try to connect to your Ellipse (see section “Connecting to Ellipse” below), a message will ask you to change FDTI USB serial converter configuration (see Figure below). Please follow instructions to ensure proper operation.



Starting with the development board

The evaluation board has been designed to test most of the Ellipse Micro functions and also to configure the device without the need to develop specific cabling.



First use of the evaluation board – typical setup

By default, the Ellipse Micro M1 is configured in RS-422 mode and M2 in RS-232. Check that the evaluation board is properly configured before running the sbgCenter for the first time:

1. Plug the Ellipse Micro module on the development board
2. To select **RS-422** mode, please set **SW4** and **SW5** in following positions:



3. To select **RS-232** mode on PORT A and PORT E through RS232 DB9 plug, please set **SW4** and **SW5** in following positions:

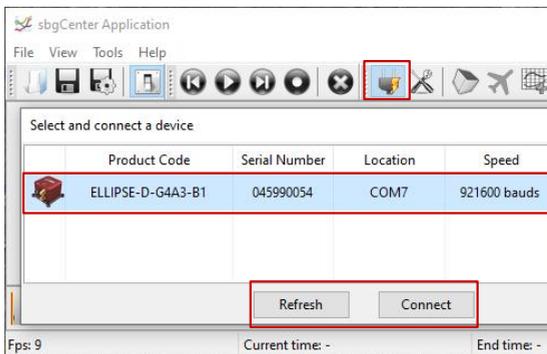


4. **SW1, SW2, SW3** can be set to “Disabled”. 

Getting Started with the Ellipse Micro

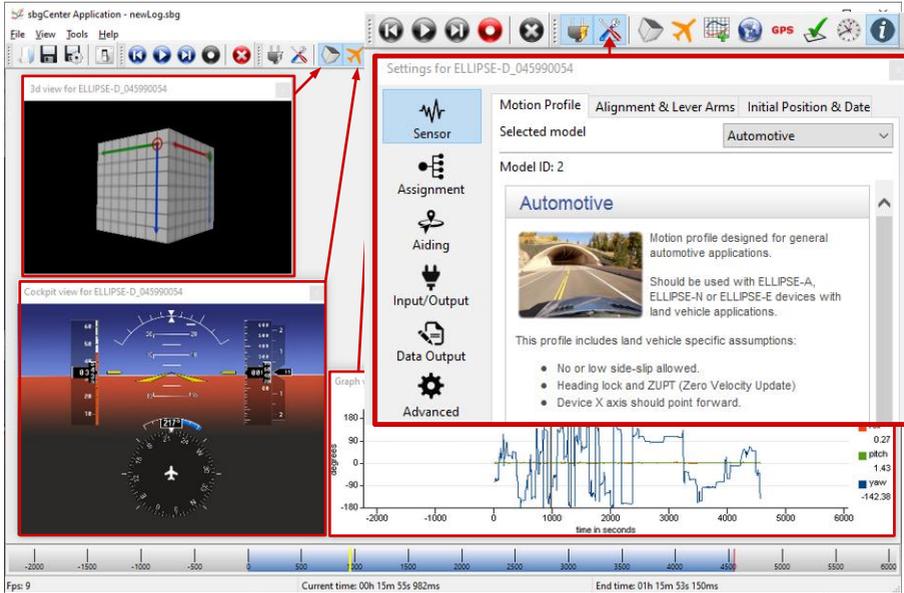
Connecting to the Ellipse

1. Click on the  icon. A window will appear to list every attached device.
2. Click on Refresh button to update the device list, select your sensor.
3. Finally press “Connect” to start working.



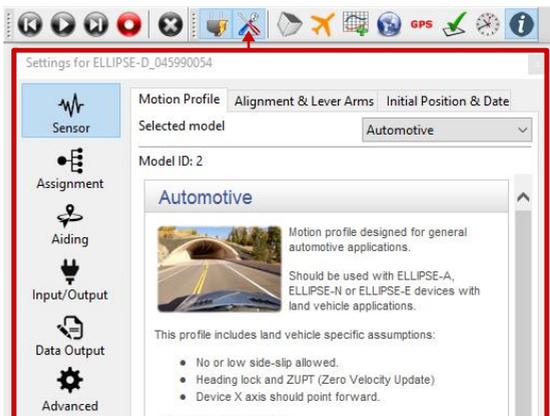
Displays

The sbgCenter provides a wide range of displays to visualize your sensor data such as 3D Cube or Cockpit view for orientation display, 2D Map, Time series graphs, GNSS data, Device status UTC Time & data, and more.



Configuration

In order to configure the Ellipse, you should click on the  Toolbox icon on sbgCenter task-bar to access the different configuration sections of the Ellipse:



Find out more

Useful documentation

The Ellipse Micro **Hardware Manual** provides deep information about your Ellipse features and explains in details how to install and use it. It also details the evaluation board capabilities.

The **Firmware Reference Manual** provides low level protocol specifications.

The **Technical Reference Manual** covers all the theory of operation and general INS / AHRS guidelines.

Several “**Operating Handbooks**” are also available to guide you in a step-by-step way into typical applications configuration.

Interface using sbgECom C library

A convenient way to interface an Ellipse with C programs is to use the sbgECom library. With simple C functions, you can retrieve the device's output very quickly. Library source code is provided with example to help you to start. **Look here:**

C:\Program Files\SBG Systems\Inertial SDK\Ellipse\Software Development

Use NMEA and third party protocols

The Ellipse provides a wide range of input / output options. NMEA protocol as well as other third party protocols support will ensure seamless integration into your application.

Support

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

SBG Systems S.A.S.
1, avenue Eiffel
78420 Carrières-sur-Seine
FRANCE

Phone: +33 1 80 88 43 70
Fax: +33 1 80 88 45 01

sales@sbg-systems.com
support@sbg-systems.com

SBG Systems North America, Inc
5932 Bolsa Avenue, Suite #103
Huntington Beach, CA 92649
United States

Phone: +1 (657) 549-5807
Fax: +1 (657) 845-1778

sales.usa@sbg-systems.com
support@sbg-systems.com