

— Quanta Series

High perf, OEM Inertial Systems

Quick Start Guide



Document
Revision

QUANTAQSG
May 23, 2019

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

Content of a development Kit

- This quick start guide
- An evaluation board
- A set of screws to fix the Quanta device on evaluation board
- Cable accessories including USB cable, RJ-45 Cable, SMA adapters
- A AC/DC power supply with international plugs
- A USB Stick containing
 - sbgCenter analysis tool, sbgECom C library + code examples
 - Full documentation including Firmware reference manual and Hardware manual

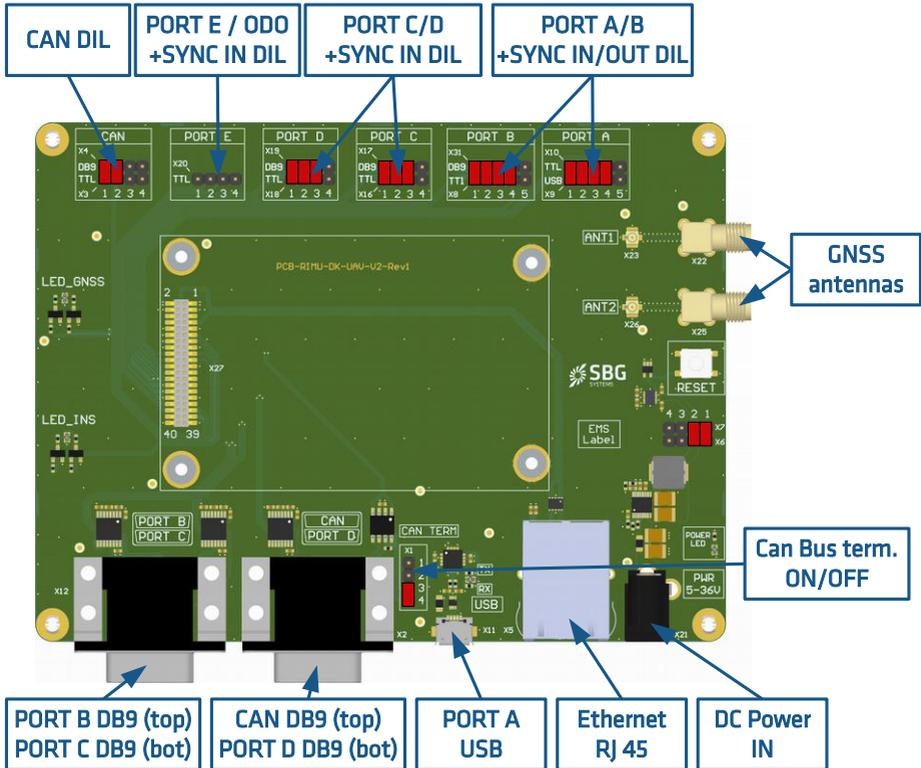
Starting with the development board

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

By default, the board is shipped with jumpers placed at the red square marks on the next picture. Default configuration enables communication through the standard connectors:

- USB Micro for PORT A
- RJ-45 For Ethernet interface
- DB 9 plugs for PORT B, C, D (RS-232)
- DB-9 for CAN interface
- DC 2.1 mm jack for power supply
- DIL 2.54mm pitch connector for PORT E (TTL)

By pulling off some jumpers, you will be able to access the direct TTL signals coming in or out of the Quanta device. Please check the Quanta series Hardware Manual for more details about this.



Software development Kit

The Software development kit is a set of tools that enable quick and easy use of Quanta systems. Although this step is not mandatory, it should be installed prior to the first use of your system.

The SDK runs on all Windows platforms and contains the following tools:

- sbgCenter software for easy connection to the web page, real time display, recording logs and analyze the data
- sbgNetworkDiag tool, that troubleshoots all network communication issues
- Full documentation including Hardware Manuals, Technical Reference Manual and Firmware manual
- sbgECom C library and associated code examples

In order to install the SDK on your PC, you need to plug the USB key, launch Inertial SDK executable and follow the instructions.

First use of a Quanta sensor

Connect to the Quanta web page

Using sbgCenter

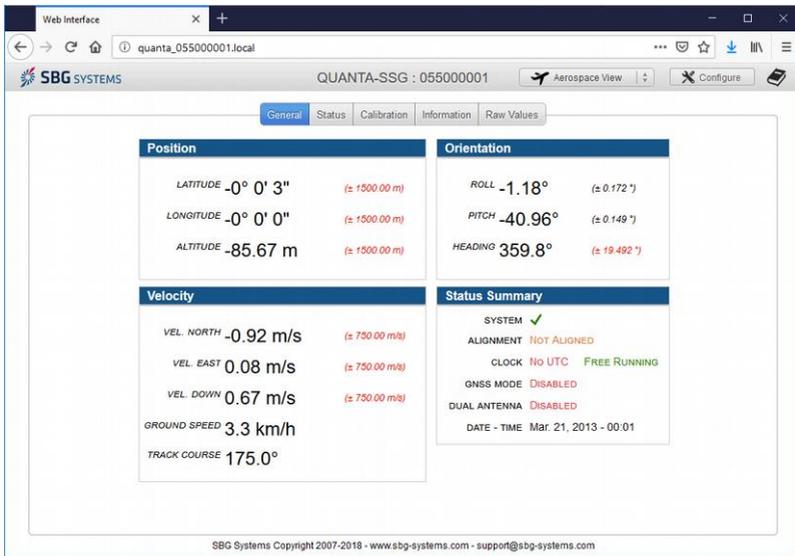
The web page is the main way to configure the Quanta system, and check the system status and health. SBG Systems recommends the use of a modern web browser to get an optimal user experience.

On Windows platforms, the easiest way to connect to the Quanta device is to launch the sbgCenter to scan for devices on the network. Click on  icon to scan for devices. Once connected, you can go to the web page by clicking on  icon and then clicking on “Open Configuration” button.

All platforms

On all platforms that have zeroconf implemented, it's possible to connect to the device web page by typing the following address in your web browser:

http://quanta_055000010.local where 055000010 is your device serial number.



Record data for post-processing

A typical use of Quanta solution is to store the IMU and GNSS data on the datalogger for post-processing after the mission. This can be done easily through the main web page button.

Once the mission is finished, you can get the logged data back using the FTP server, at this address:

ftp://quanta_055000001.local

The recorded files can be directly used by Qinertia post processing suite.



Troubleshooting

If your Quanta device was previously used in another network with a specific configuration, it can be difficult to access the web page and other Ethernet services. You can easily sort this out by using the sbgNetworkDiag tool.

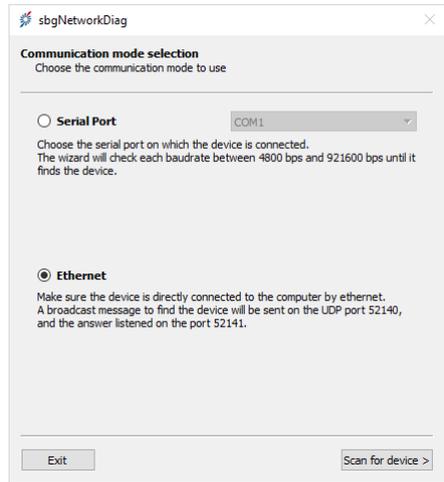
Reconfigure network with sbgNetworkDiag

This tool is intended to reconfigure easily your Quanta network settings without affecting other parameters.

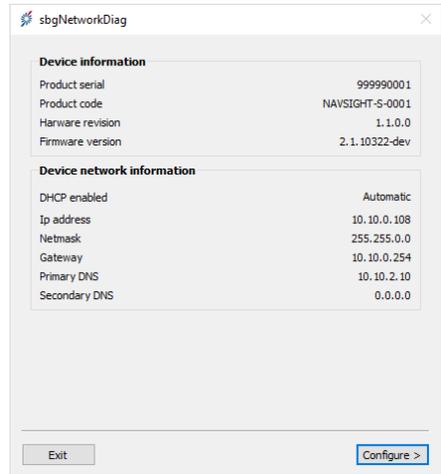
Step 1, connect to your system (Ethernet or Serial)

You can use either a direct Ethernet connection to your PC (Leaving the Quanta device on a network is not recommended for this step).

Alternatively, it is possible to use this tool through a UART connection on Quanta PORT A, B or C.

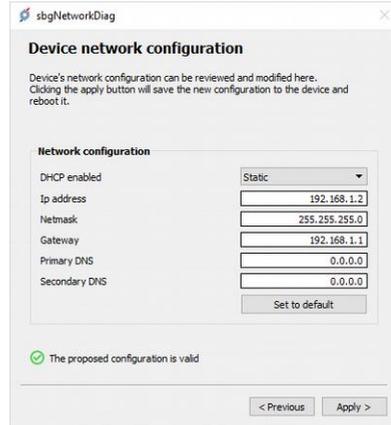
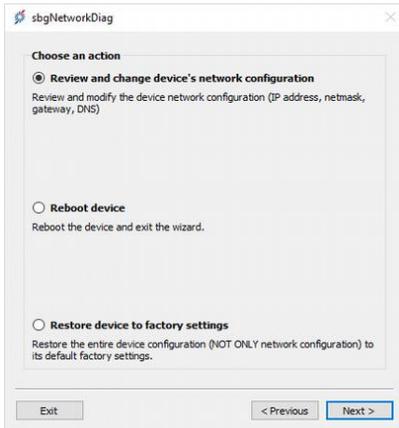


When a device is detected, sbgNetworkDiag lists the main device information and its current network configuration.



Step 2, reconfigure the network or restore settings

Once connected, you have the possibility to setup Quanta Ethernet configuration or revert it to defaults. You can also revert all settings to factory defaults and simply reboot the unit.



Find out more

Useful documentation

The Quanta series **Hardware Manual** provides deep information about your Quanta device features and explains how to install and use it. It also specifies the evaluation board.

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.

Communication with third party systems

Quick and efficient C library: sbgECom

A convenient way to interface a Quanta device 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”

Interface with existing systems using 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:

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