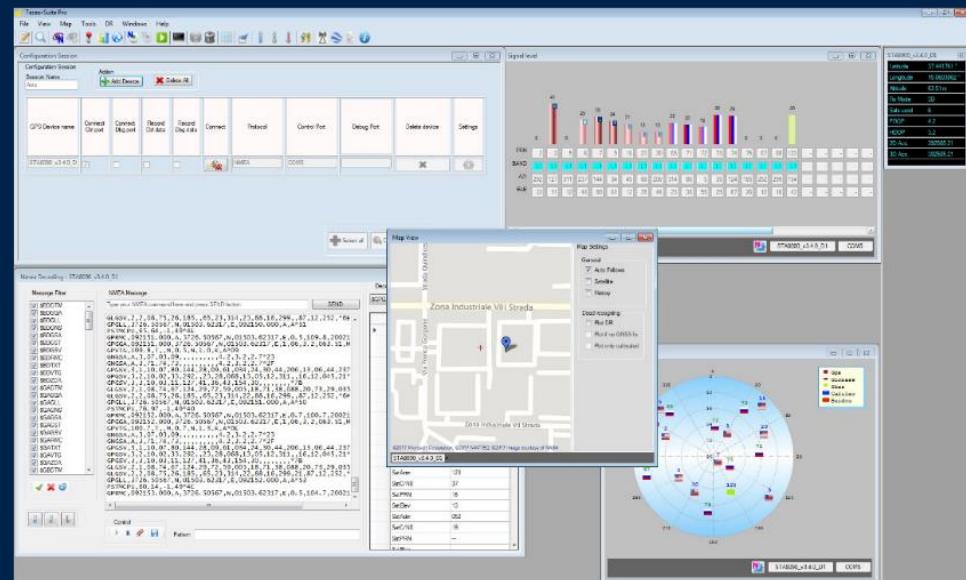




# Teseo-Suite - Firmware Configuration Quick Training Guide

Easy way to configure Teseo III ICs and Teseo GNSS Modules





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# Introduction

- Teseo-Suite is a powerful PC tool designed to manage, configure and evaluate the performance of all features and functions ST's Teseo GNSS solutions.
- Its configuration panel lets developers configure and evaluate all parameters of Teseo ICs and modules
- Configuration panels can work on
  - Connected devices during runtime using NMEA commands
  - Off-line on a binary file stored on the PC



# Firmware data-model

- Each Teseo binary image or module firmware has a unique binary-ID (SW binary version); for each SW binary version, a specific xml-file-firmware-datamodel is available in Teseo-Suite
- The Firmware-DataModel guarantees the correct view and field descriptions for each Teseo firmware solution (ICs and Modules)



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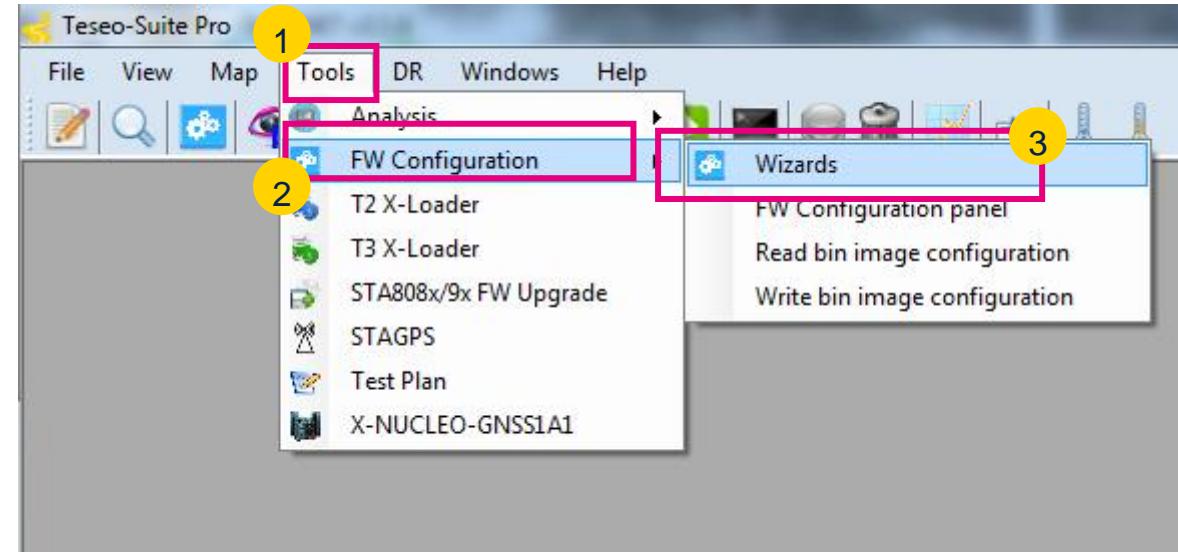
Documents & related resources



# Using the FW configuration wizards

In the Teseo-Suite menu, select:

- 1 Tools
- 2 FW Configuration
- 3 Wizards



- When opening the Wizards, Teseo-Suite detects the connected device to load the SW binary version used to match the specific firmware-datamodel:
  - If the SW binary version matches, all the device-configuration is read from the device and decoded to fill in all the parameter's value
  - If the SW binary version doesn't match the xml file, an error message is displayed and the user must manually select an xml-file from the database



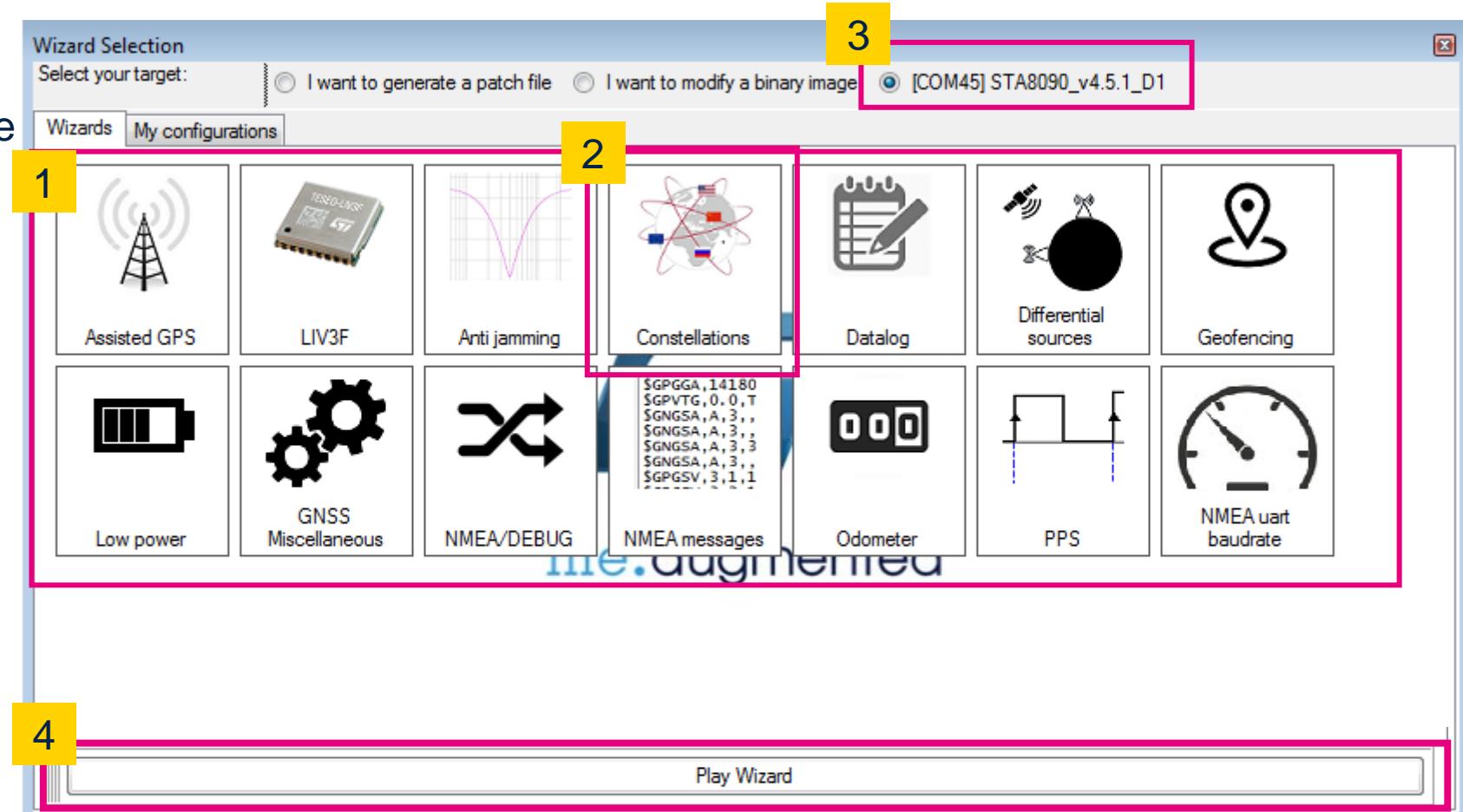
# FW wizard overview

1 Dashboard of available wizards

2 Wizard panel button (multiple selection allowed)

3 Connected device

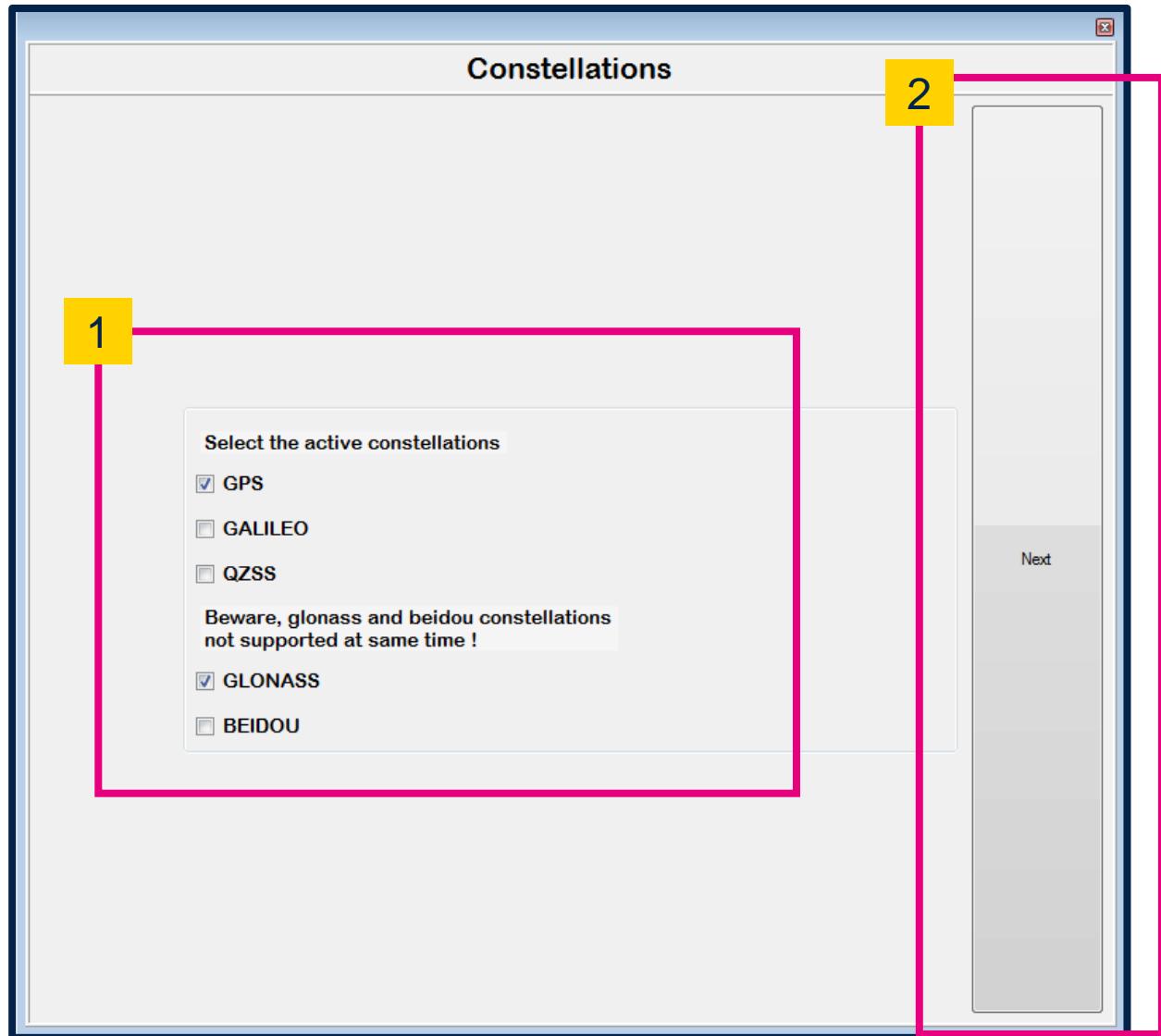
4 Button to run the wizard





# FW wizard panels

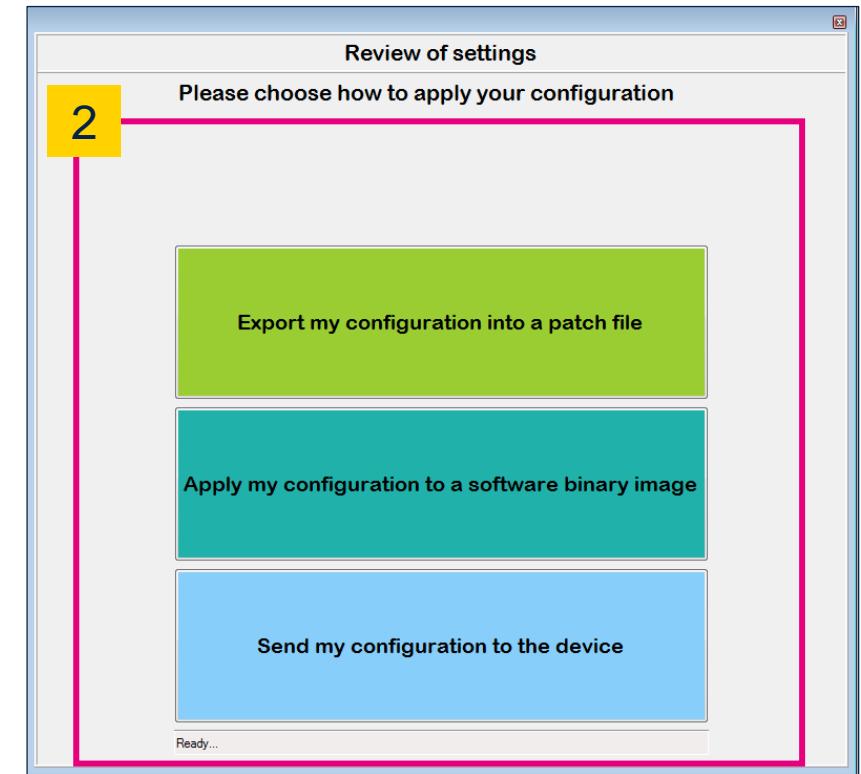
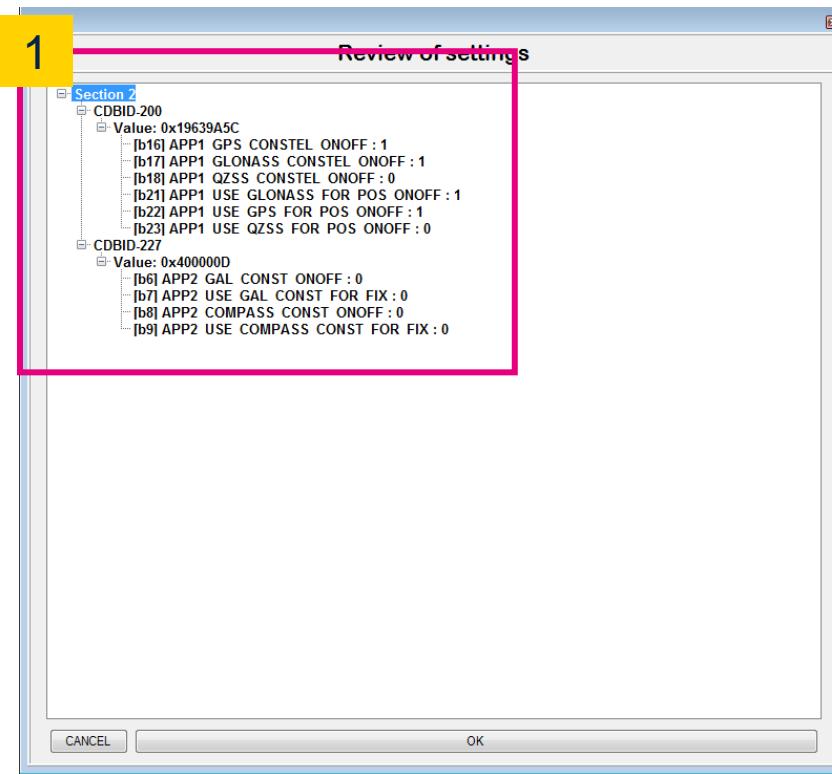
- 1 Each wizard panel can be configured individually
- 2 Click Next to continue





# FW wizard configuration

- 1 After configuring the wizard, the user can review the modified Configuration Data Blocks (CDB)
- 2 Apply the new configuration to the connected device or file





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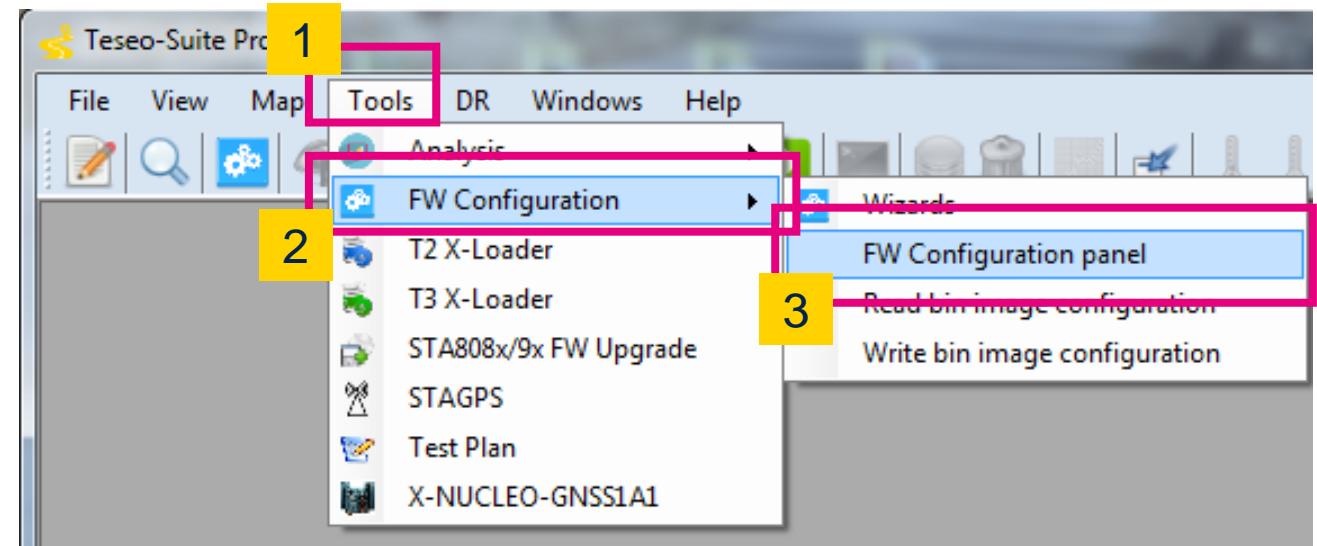
4

Documents & related resources

# Using the FW configuration panel

In the Teseo-Suite menu, select:

- 1 Tools
- 2 FW Configuration
- 3 FW Configuration panel



- When opening the FW Configuration panel, Teseo-Suite detects the connected device to load the SW binary version used to match the specific firmware-datamodel:
  - If the SW binary version matches, all the device-configuration is read from the device and decoded to fill in all the parameter's value
  - If the SW binary version doesn't match the xml file, an error message is displayed and the user must manually select an xml-file from the database



# FW configuration panel overview

Tree view showing all the parameters sorted either by group either by family

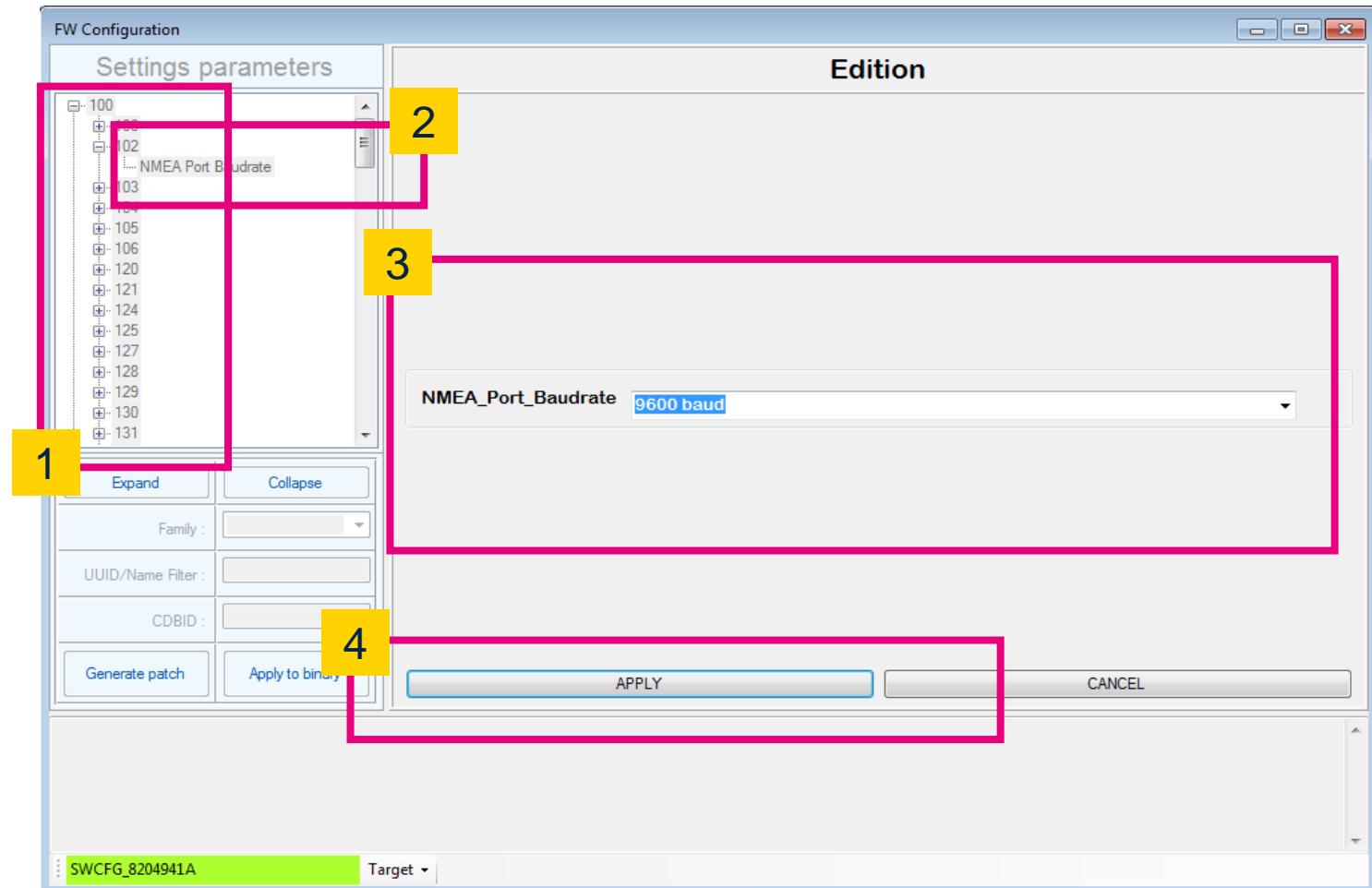
Hidden parameters not visible

CDB under editing



# Modify the configuration [1/2]

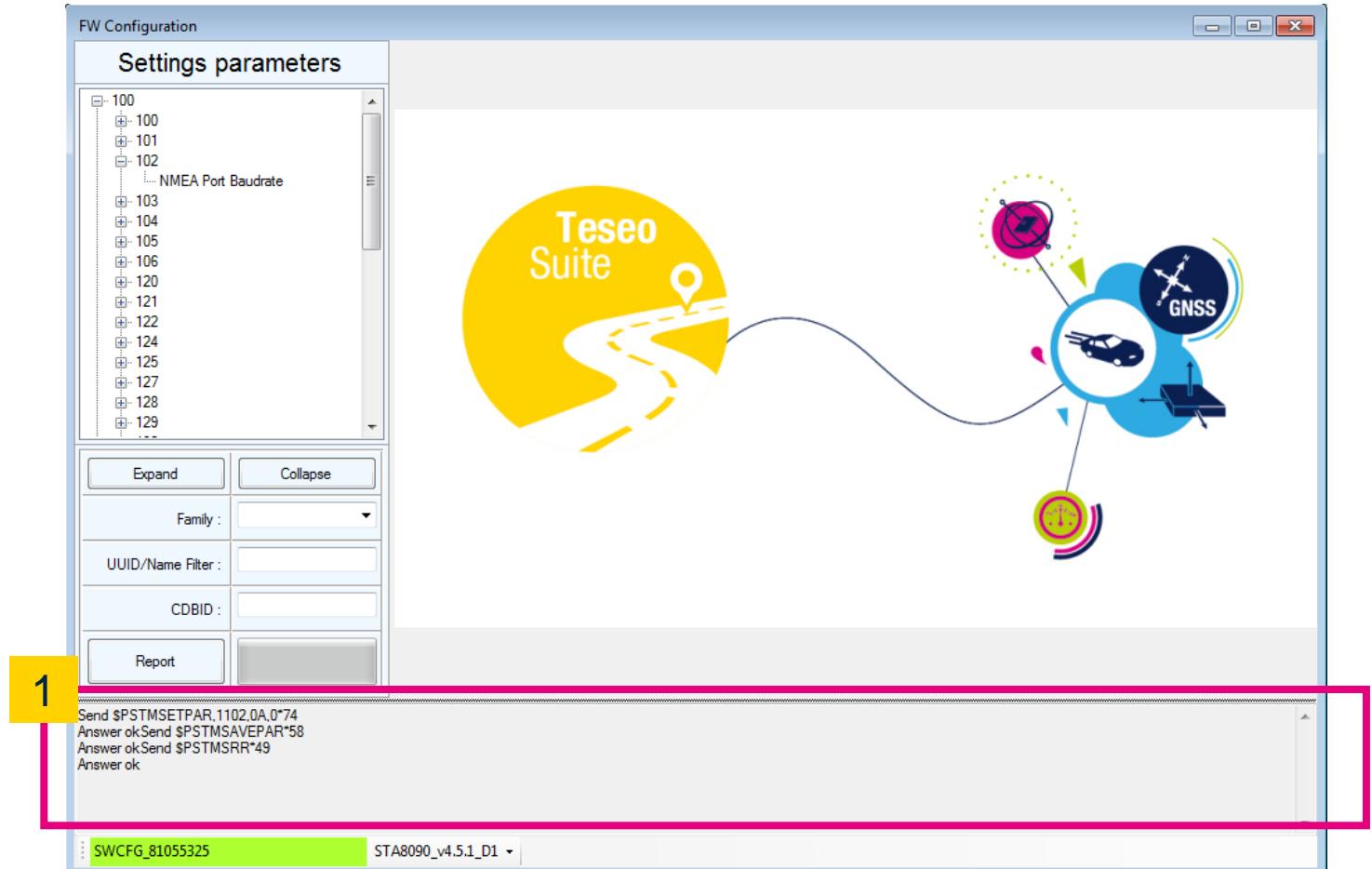
- 1 Expand the tree to select the correct CDB-ID
- 2 Double-click on the field
- 3 The Edition panel will appear with the allowed values
- 4 Apply your changes





# Modify the configuration [2/2]

- 1 In the log panel, you can highlight the NMEA replies to the Teseo commands to modify the configuration





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# Documents & related resources

All documents are available on:  
[www.st.com](http://www.st.com)

## Teseo ICs: [Webpage](#)

- Product datasheets

**GNSS ICs**

ST's Teseo family of Global Navigation Satellite System ICs combines high positioning accuracy and indoor sensitivity with powerful processing capabilities, to simultaneously support multiple global navigation systems (BeiDou, Galileo, GLONASS, GPS, and QZSS).

Teseo III is the latest generation of GNSS ICs, and compared to Teseo II offers reduced power consumption, carrier-phase tracking for higher accuracy, and support for Ready-only Memory (ROM).

Our product offering includes standalone positioning chips (SAL) and configurable system-on-chips (SoCs). The standalone devices are offered with GNSS firmware embedded, to perform all positioning operations including tracking, acquisition, navigation and data output. The SoCs offer power processing and spare memory to enable customers and partners to easily and efficiently merge their code or specific IPs with ST's GNSS library to create a highly optimized platform.

Both solutions come with different package options and memory size, and are compatible with the TESEO-DRAW sensor fusion firmware for dead-reckoning and assisted navigation.

Teseo devices address e-call and telematics systems, personal navigation in PNDs and handheld devices, as well as marine and in-car navigation systems.

**TESEO-SUITE** [ACTIVE](#)

PC software tool to manage, configure and evaluate the performance of the Teseo GNSS solution.

[Download Databrief](#)

[QUICK VIEW](#) [RESOURCES](#)

ST TESEO-SUITE is a powerful PC Tool able to manage all the capabilities of ST Teseo GNSS solution. It is able to manage GNSS solutions in parallel.

On each ST TESEO GNSS solution the Teseo Suite is able to read, modify and save the configuration.

NMEA sentences logging and analysis supported. NMEA message-list configurable per port.

**Key Features**

- Multiple GNSS tracer
- Multiple protocol support
- GNSS firmware configuration tool
- GNSS flashing tool
- Dead reckoning panel
- NMEA diagnostic tool
- Satellites signal monitoring viewer
- Map viewer
- Log viewer

**RESOURCES**

[Quick Links](#)

**Technical Documentation**

**Product Specifications**

Description	Version	Size
DB2224 PC GUI software to control, configure and performance analyze of Teseo GNSS family	1.0	59 KB

**Legal**

**License Agreement**

Description	Version	Size
SLA0056 Software license agreement	1.6	59 KB

**EVB-T3** [ACTIVE](#)

TESEO III evaluation board

[Download Databrief](#)

[QUICK VIEW](#) [RESOURCES](#) [TOOLS AND SOFTWARE](#) [SAMPLE & BUY](#) [QUALITY & RELIABILITY](#)

Teseo EVB board is a complete standalone evaluation platform for Teseo III GNSS ST solution.

Teseo III embeds the high performance ARM946 microprocessor with dedicated SRAM and several serial communication interfaces, including USB, SPI, I<sub>C</sub>, UART and CAN.

Performance and configuration can be analyzed using the ST TESEO-SUITE PC Tool.

**Key Features**

- ST Teseo III GNSS platform
- Multicore/multiband GNSS: GPS, Galileo, Glonass, BeiDou, QZSS are supported;
- USB Power Supply and battery charge;
- Internal battery for standalone usage;
- ON/OFF and Reset buttons available;
- NMEA over:

**RESOURCES**

**Technical Documentation**

**Product Specifications**

Description	Version	Size
DB3223 Teseo III GNSS evaluation board	1.0	137 KB

## Teseo-Suite: [Webpage](#)

- Datasheet, user manual and training material
- Install program
- Video training



# Join the ST GNSS community

- Get involved in the ST GNSS community
- Share ideas
- Ask questions

The screenshot shows the ST GNSS Community website. At the top, there's a navigation bar with links for Home, Forums, Communities, Browse, Actions, and About this community. Below the navigation is a banner for 'GNSS Positioning' featuring a cityscape and icons for location, gear, and a person. The main content area has tabs for Activity, Content, People, Subspaces, Events, and Reports. A search bar is at the top of the content area. On the left, there's a sidebar with categories like Teseo-Suite, Teseo III, and Teseo-LIV3. The right sidebar lists popular content such as 'Welcome to GNSS/Positioning community', 'Introducing X-NUCLEO-GNSS1A1', and 'FAQ on Teseo III'. A featured content section at the bottom right says 'Saved'. In the center, there's a post by user Francesca about the X-NUCLEO-GNSS1A1, which includes a small diagram of the board.



<https://community.st.com/community/gnss>