TESEO-SUITE software
Assisted GNSS technology

Quick Training Guide

Feb 2021

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Introduction

- Standard GNSS receivers only use data from satellites and require 30 to 32 seconds to evaluate the first position from the moment power is turned on (Time To First Fix – TTFF).
- Assisted-GNSS (AGNSS) is a technology which speeds-up the TTFF, thanks to extra data provided to the GNSS
- Teseo III and Teseo modules support three Assisted GNSS technologies:
  - Self-Trained Assisted GNSS
  - Predictive Assisted GNSS
  - Real-Time Assisted GNSS

Assisted GNSS technology

Self-trained	Predicted	Real-time
ST-AGNSS predicts satellite data based on previous observation of satellite broadcasted data.	P-AGNSS predicts satellite data based on data downloaded by an assistance server	RT-AGNSS uses real-time satellite data downloaded by an assistance server
No internet connection needed	Internet connection **NEEDED** (10 ~ 16 KB data for every download based on constellations)	Internet connection **NEEDED** (16 KB data for every 4 hours based on constellations)
5 to 6 days prediction	**14-day prediction**	**Continuous /Real Time**
TTFF ~ 1 - 4 s	TTFF ~ 1 - 4s	TTFF: 1 s

Management over proprietary NMEA commands
Subject to agreement on service-level

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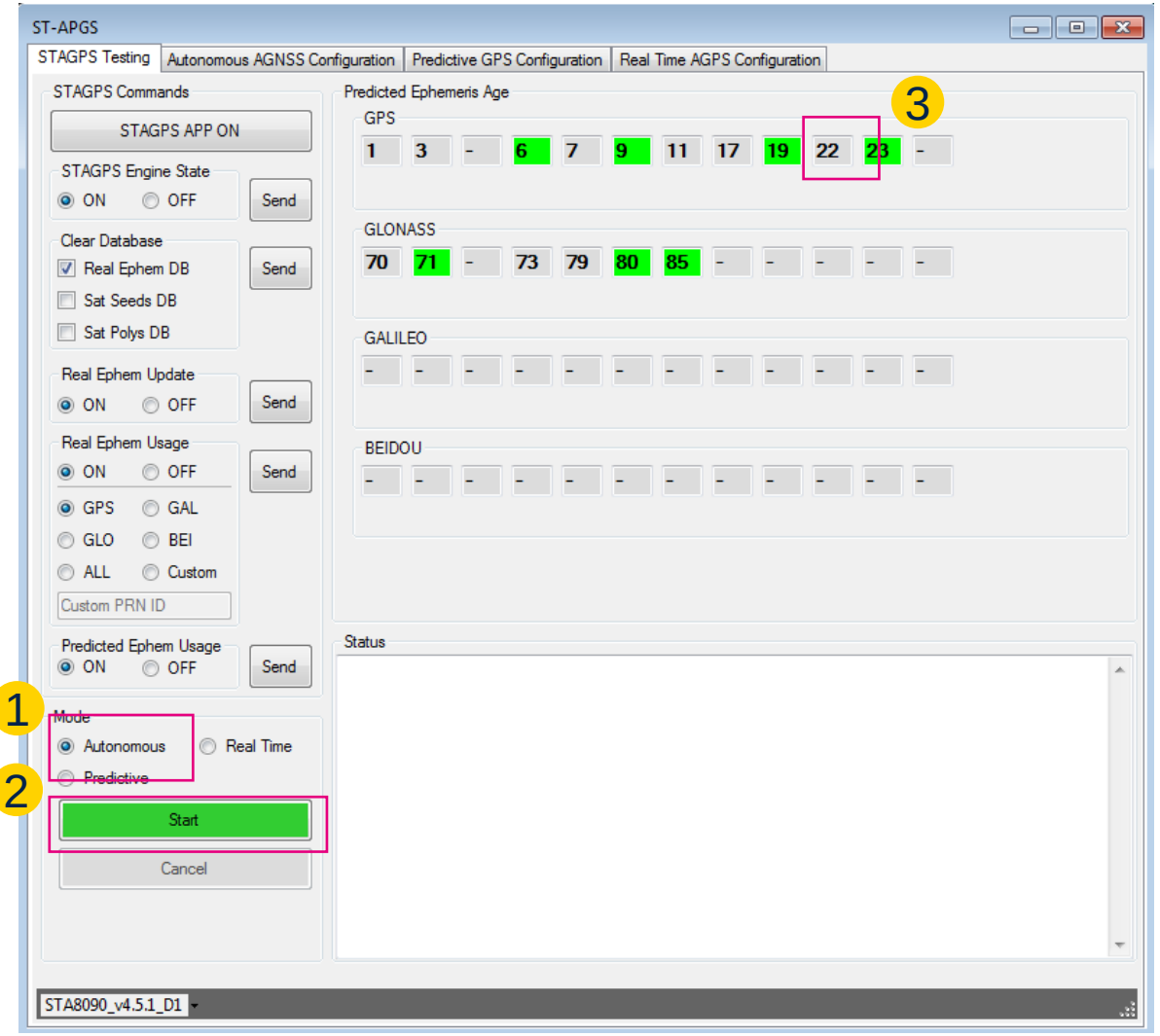
ST-AGNSS panel



1. Switch on the Autonomous Mode
2. Enable ST-AGPS monitoring in TESEO-SUITE
3. Prediction state for each satellites
   Color describes the prediction state of each satellite:

Grey	No prediction available for the satellite
Green	Fresh prediction available for the satellite
Yellow	Old prediction available for the satellite
Red	Very old prediction available for the satellite

NB: the STMAGPS message has to be enabled in the message list

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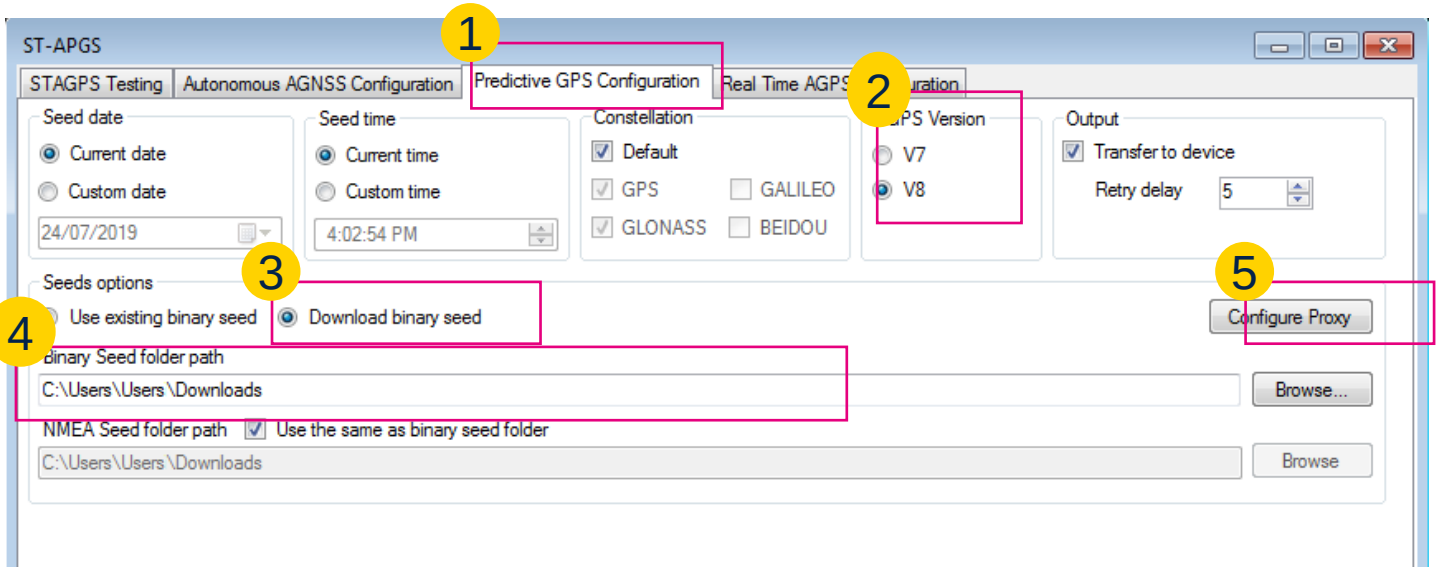
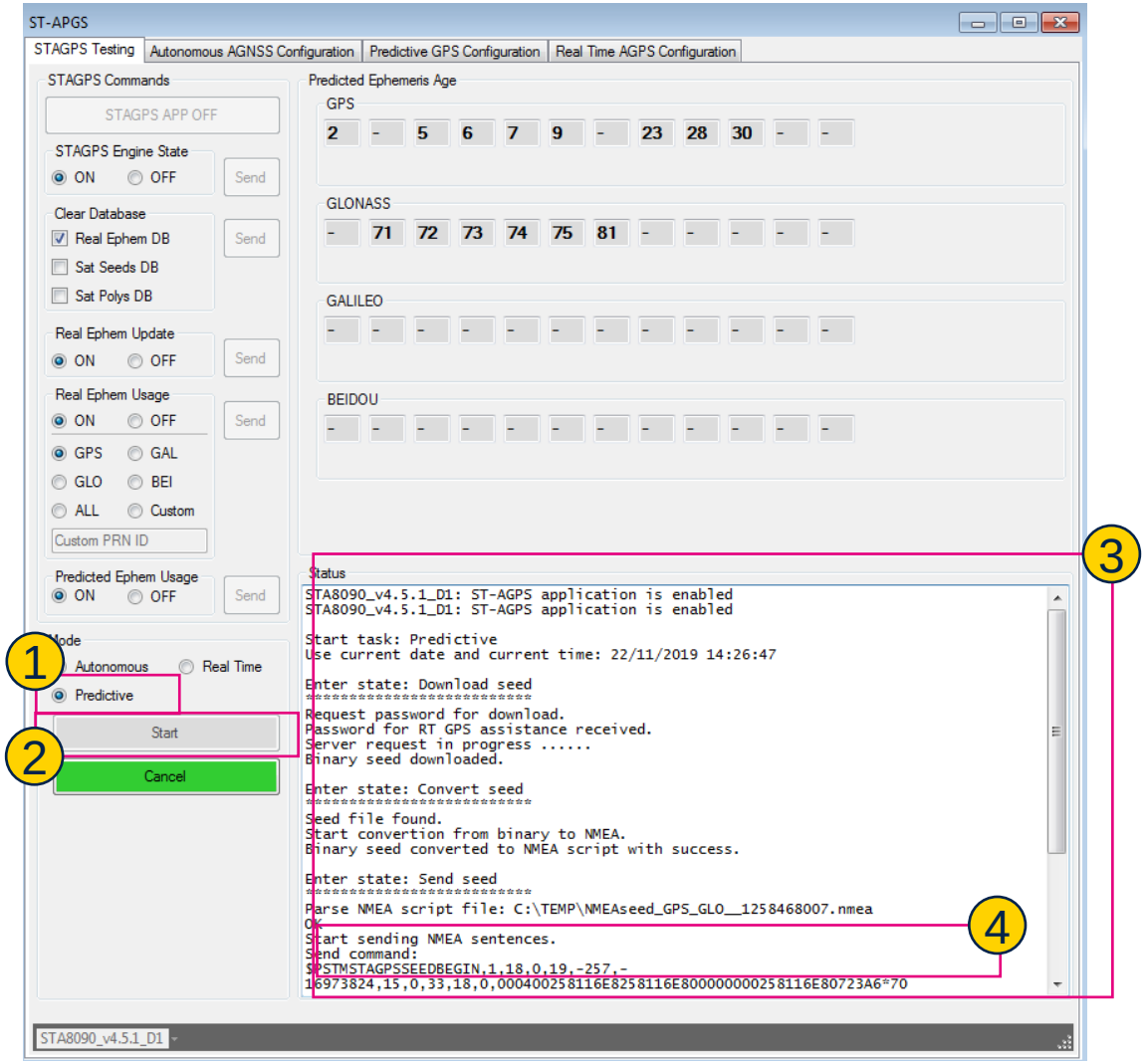
Predictive AGNSS configuration



1. Go to the **Predictive Tab**
2. Switch on Version **V8**
3. Switch on '**Download binary seed**'
4. Define where to save the seed-file
5. Configure the http-proxy if needed

Predictive AGNSS running



1. Switch on the predictive AGNSS mode
2. Select the Start button to trigger the real-time process
3. Monitor the action in progress
4. Seed packets are sent to Teseo III GNSS solution

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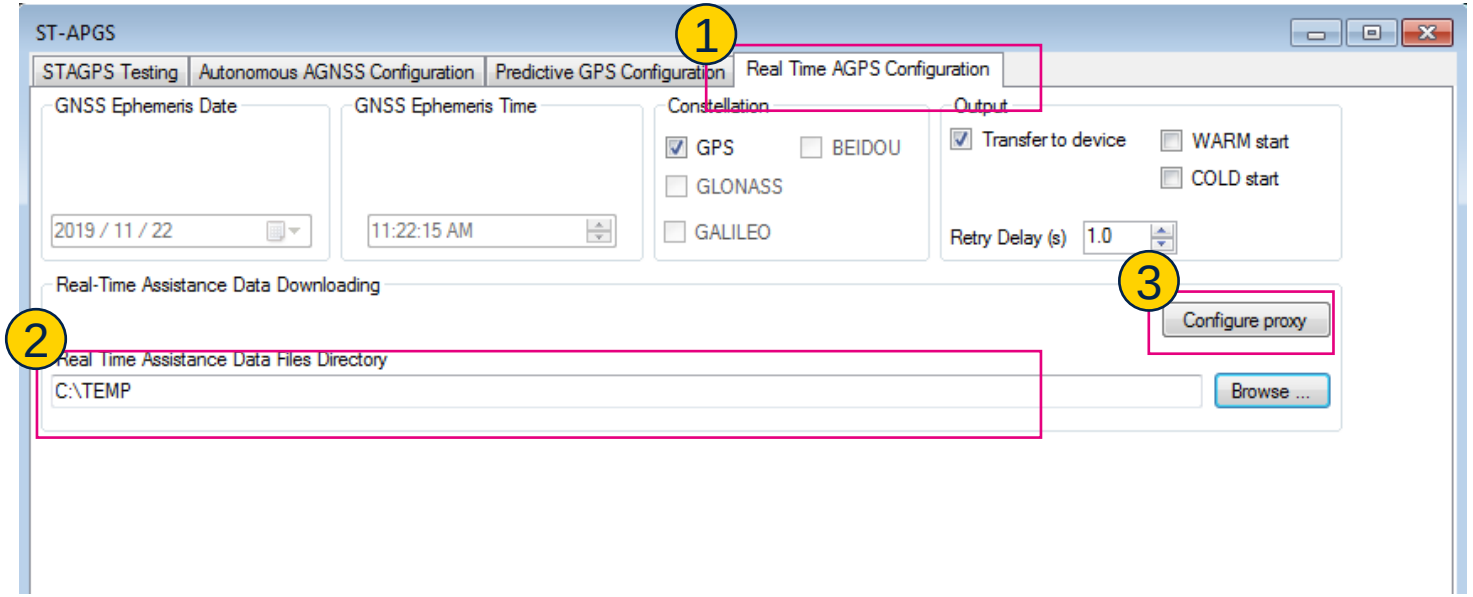
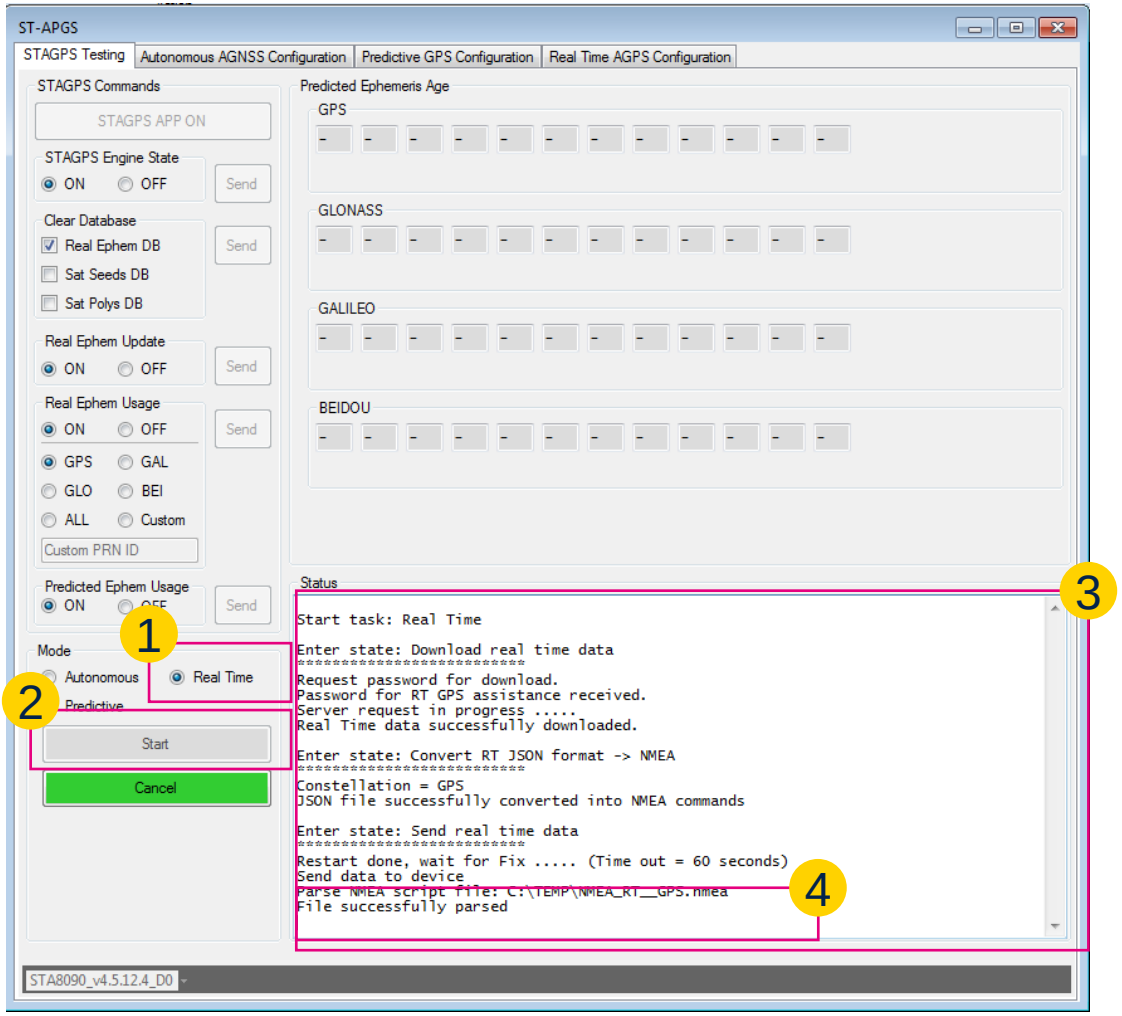
Real-time AGNSS configuration



1. Go to the **Real-Time Tab**
2. Define where to save the RT-file
3. Configure the http-proxy if needed

Real-time AGNSS running



1. Switch on the Real-Time AGNSS mode
2. Select the Start button to trigger the real-time process
3. Monitor the action in progress
4. Operation completed

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Documents & related resources available on st.com

Teseo III: Webpage

- Data-sheet of all PNs

Teseo Modules: Webpage

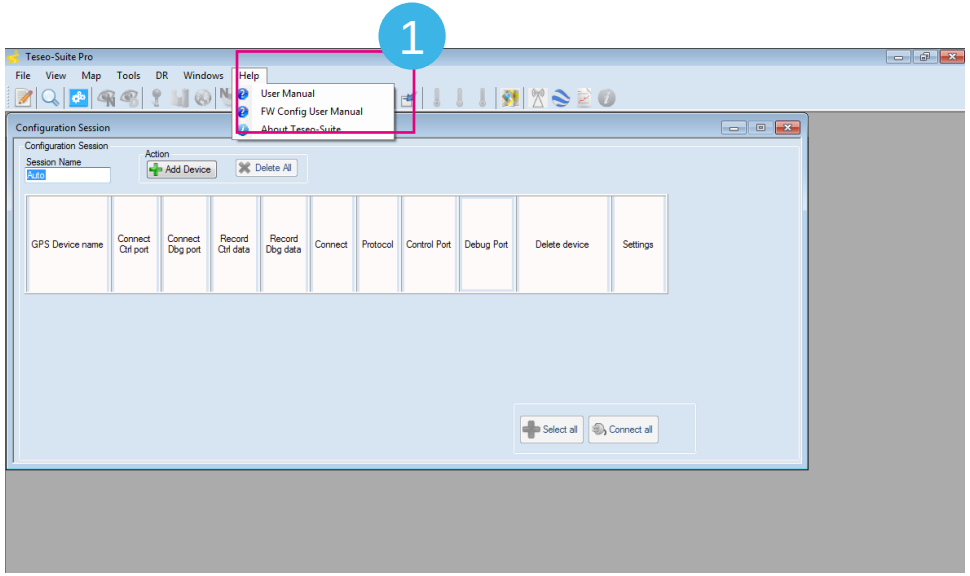
- Data-sheet of all PNs

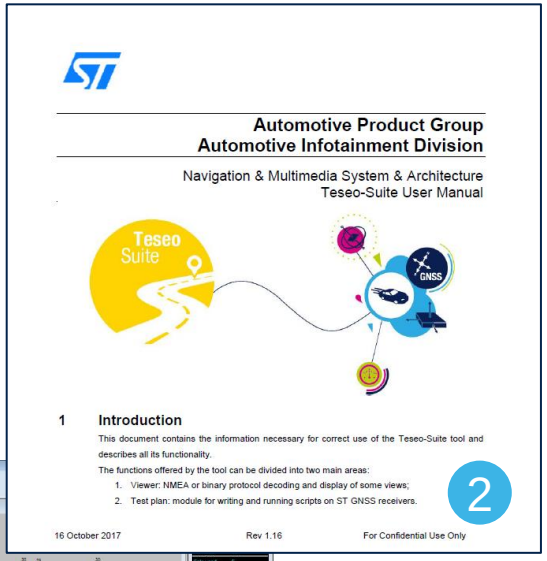
Teseo Suite: Webpage

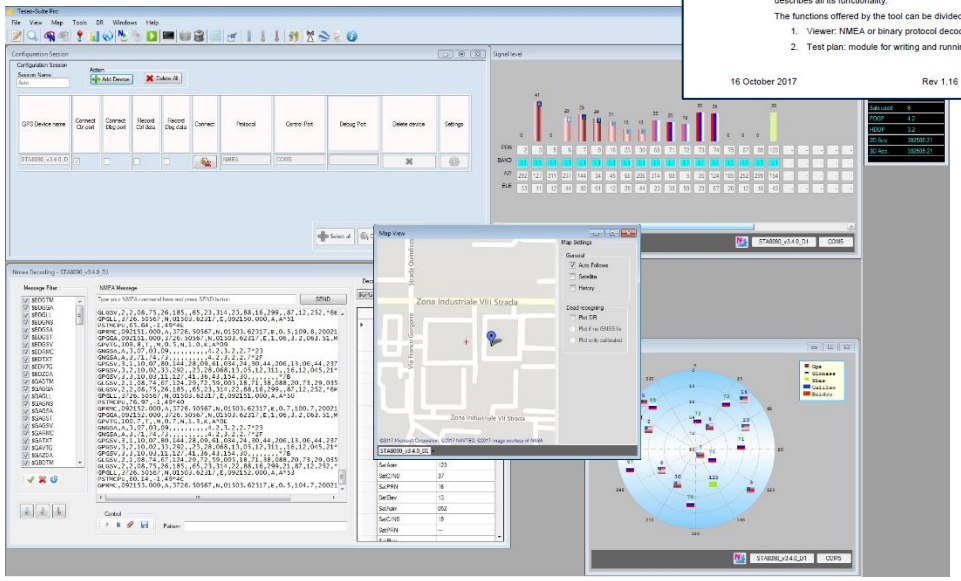
- Datasheet
- Install program

Teseo suite – extra features

1. Select the Help menu to access the user manual
2. The user manual includes all the information needed







GNSS solution development TESEO-SUITE

- Get started on your GNSS solution with ST's Teseo III and Teseo Module using TESEO-SUITE software to explore all the available features.

Teseo III ICs | **Teseo Modules**