



Teseo III and Teseo modules data logging

Quick Training Guide

Version. 1.0 - Nov. 2021



Introduction

2 NMEA-API

Putting all together





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Introduction

- Teseo III Binary Image and Teseo Modules embed also the Data-Logging subsystem
- Data-Logging can be used to track/record a path
- Data-Logging subsystem has a set of specific NMEA commands and messages to operate





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Create a log

- A log is created to specify:
- Configuration
- Log type
- Lowest speed, lowest rate and lowest distance to record a new sample in the log

\$PSTMLOGCREATE, <cfg>, <min-rate>, <min-speed>, <min-position>, <logmask>*<checksum><cr><lf>

Configuration:

- Enable Circular-buffer
- Alarm buffer-full

Lowest rate, lowest speed and lowest Log-type distance to record a new sample in the log





Start, stop and delete a log

A log can be started, stopped and deleted by the host with the following commands:

\$PSTMLOGSTART*<checksum><cr><lf>

\$PSTMLOGSTOP*<checksum><cr><lf>

\$PSTMLOGERASE*<checksum><cr><lf>





Query the data-logging state

Host can query the datalogging subsystem state with the command:

\$PSTMLOGREQSTATUS*<checksum><cr><lf>

Teseo III replies with the message:

\$PSTMLOGSTATUS, <time-first-entry>, <data-first-entry>, <time-last-entry>, <data-last-entry>, <nrused-entries>, <buffer-status>, <free-entries>*<checksum><cr><lf>

- Where it reports:
 - Time and date of the first and last sample*
 - Number of used and free entries
 - Buffer status



* The first entry is marked internally and it has to be skipped



Query the log data

Host can query the log with the command:

\$PSTMLOGREQQUERY, <start-timestamp>, <start-datestamp>, <numentry>*<checksum><cr><lf>

Teseo III replies with one message per sample:

\$PSTMLOGQUERY, <status-bitmap>, <logask>, <timestamp>, <datestamp>, <altitude>, <odometer>, <geo>,
<quality>, <qualidx>, <fix>, <speed>*<checksum><cr><lf>





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Putting all together...

Using the **Teseo-Suite**, the Host can send the commands and check the Teseo III message responses.

HOST > \$PSTMLOGCREATE.1.1.0.0.1

T3 < \$PSTMLOGCREATEOK*5E

HOST > \$PSTMLOGSTART

T3 < \$PSTMLOGSTARTOK*1A

HOST > \$PSTMLOGSTOP

T3 < \$PSTMLOGSTOPOK*42

HOST > \$PSTMLOGREQSTATUS

T3 < \$PSTMLOGSTATUS,084126,20181128,084146,20181128,21,0,43627*67

HOST > \$PSTMLOGREQQUERY,084127,20181128,20

T3 < \$PSTMLOGQUERY,1,1,084126,20181128,3,2,1,37.441792,15.060400,0.0,0.0,0.0*0c

T3 < \$PSTMLOGQUERY,3,1,084146,20181128,3,2,1,37.441792,15.060400,0.0,0.0,0.0*09

HOST > \$PSTMLOGERASE

T3 < \$PSTMLOGERASEOK*1A





Take care of...

The first field in the \$PSTMLOGQUERY is a bitmap which specifies:

2b00: No more data, and the data in the message is invalid

2b01: more data available, and the data in the message is valid

2b11: No more data available, and the data in the message is valid

T3 < \$PSTMLOGQUERY,3,1,084127,20181128,3,2,1,37.441792,15.060400,0.0,0.0,0.0*0c





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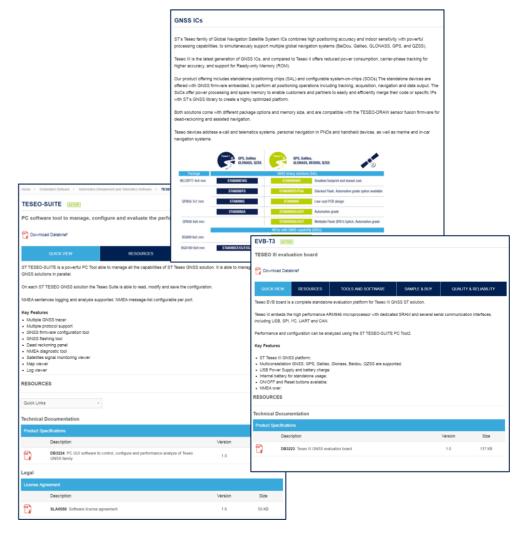




Documents & related resources

All documents are available on: www.st.com

- Teseo III: Webpage
 - Datasheet of all PNs;
- Teseo Modules: Webpage
 - Datasheet
 - User Manuals
- Teseo-Suite: Webpage
 - Datasheet
 - Training materials
 - Install program





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