TelitView Software Description (Version 2.1.6)

80000DSW10085A Rev 3   2016-12-16

APPLICABLE PRODUCTS

PRODUCT	
SL871	SC872-A
SL869-V2	SE868-A
SL871-S	SL869-V2S
SE868-AS	
SL869	SL869-DR
SL869-T	SL869-V3
SL869-3DR	SL869-V3T
SL869-ADR	
JF2	SE880
JN3	SE868-V2
SE873	SE868-V3
SL876-A	

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Notice

While reasonable efforts have been made to assure the accuracy of this document, Telit assumes no liability resulting from any inaccuracies or omissions in this document, or from use of the information obtained herein. The information in this document has been carefully checked and is believed to be entirely reliable. However, no responsibility is assumed for inaccuracies or omissions. Telit reserves the right to make changes to any products described herein and reserves the right to revise this document and to make changes from time to time in content hereof with no obligation to notify any person of revisions or changes. Telit does not assume any liability arising out of the application or use of any product, software, or circuit described herein; neither does it convey license under its patent rights or the rights of others.

It is possible that this publication may contain references to, or information about Telit products (machines and programs), programming, or services that are not announced in your country. Such references or information must not be construed to mean that Telit intends to announce such Telit products, programming, or services in your country.

Copyrights

This instruction manual and the Telit products described in this instruction manual may be, include or describe copyrighted Telit material, such as computer programs stored in semiconductor memories or other media. Laws in the Italy and other countries preserve for Telit and its licensors certain exclusive rights for copyrighted material, including the exclusive right to copy, reproduce in any form, distribute and make derivative works of the copyrighted material. Accordingly, any copyrighted material of Telit and its licensors contained herein or in the Telit products described in this instruction manual may not be copied, reproduced, distributed, merged or modified in any manner without the express written permission of Telit. Furthermore, the purchase of Telit products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent applications of Telit, as arises by operation of law in the sale of a product.

Computer Software Copyrights

The Telit and 3rd Party supplied Software (SW) products described in this instruction manual may include copyrighted Telit and other 3rd Party supplied computer programs stored in semiconductor memories or other media. Laws in the Italy and other countries preserve for Telit and other 3rd Party supplied SW certain exclusive rights for copyrighted computer programs, including the exclusive right to copy or reproduce in any form the copyrighted computer program. Accordingly, any copyrighted Telit or other 3rd Party supplied SW computer programs contained in the Telit products described in this instruction manual may not be copied (reverse engineered) or reproduced in any manner without the express written permission of Telit or the 3rd Party SW supplier. Furthermore, the purchase of Telit products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent applications of Telit or other 3rd Party supplied SW, except for the normal non-exclusive, royalty free license to use that arises by operation of law in the sale of a product.

Usage and Disclosure Restrictions

License Agreements

The software described in this document is the property of Telit and its licensors. It is furnished by express license agreement only and may be used only in accordance with the terms of such an agreement.

Copyrighted Materials

Software and documentation are copyrighted materials. Making unauthorized copies is prohibited by law. No part of the software or documentation may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, without prior written permission of Telit

High Risk Materials

Components, units, or third-party products used in the product described herein are NOT fault-tolerant and are NOT designed, manufactured, or intended for use as on-line control equipment in the following hazardous environments requiring fail-safe controls: the operation of Nuclear Facilities, Aircraft Navigation or Aircraft Communication Systems, Air Traffic Control, Life Support, or Weapons Systems (High Risk Activities"). Telit and its supplier(s) specifically disclaim any expressed or implied warranty of fitness for such High Risk Activities.

Trademarks

TELIT and the Stylized T Logo are registered in Trademark Office. All other product or service names are the property of their respective owners.

Contents

1.   Introduction

The information presented in this document is believed to be accurate and reliable. However, no responsibility is assumed by Telit Communications S.p.A. for its use, nor any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent rights of Telit Communications S.p.A. other than for circuitry embodied in Telit products. This document is subject to change without notice.

1.1.   Contact Information, Support

For general contact, technical support, to report documentation errors and to order manuals, contact Telit's Technical Support Center (TTSC) at:

TS-EMEA@telit.com
TS-AMERICAS@telit.com
TS-APAC@telit.com

Alternatively, use:
http://www.telit.com/en/products/technical-support-center/contact.php

For detailed information about where you can buy the Telit modules or for recommendations on accessories and components visit:
http://www.telit.com

To register for product news and announcements or for product questions contact Telit's Technical Support Center (TTSC).
Our aim is to make this guide as helpful as possible. Keep us informed of your comments and suggestions for improvements.
Telit appreciates feedback from the users of our information.

1.2.   Text Conventions

Danger – This information MUST be followed or catastrophic equipment failure or bodily injury may occur.

Caution or Warning – Alerts the user to important points about integrating the module, if these points are not followed, the module and end user equipment may fail or malfunction.

Tip or Information – Provides advice and suggestions that may be useful when integrating the module.

All dates are in ISO 8601 format, i.e. YYYY-MM-DD.

1.3.   Related Documents

The following is a list of applicable documents downloadable from the Download Zone section of Telit's website http://www.telit.com

- TelitView User Guide (Latest revision)
- Please refer to the Applicable Products table for the supported Telit GNSS modules.

page 7 of 17
Mod. 0811 2014-10 Rev.2

2.   Delta Software from 2.1.5 to 2.1.6

2.1.   New Features

None.

2.2.   General Enhancements & Bug Fixes

Change Request ID	Description
	2.2.1. Bug fix: Position fix state update In the data replay mode, navigation state update sometimes was missed.

2.2.1.   Bug Fix: Position fix state update in replay mode

In the data replay mode, navigation state update was missed when a NMEA sentence checksum contains only one character.

3.   Delta Software from 2.1.4 to 2.1.5

3.1.   New Features

Change Request ID	Description
	2.1.1. Logger mode
	2.1.2. New MO-DR (3DR) Control Panel
	2.1.3 Setup Information in Data Log File

3.1.1.   Logger Mode

Added new Logger mode to help minimize the possibility of data loss in situations where a high data density is present at the com port.

When the Logger mode is selected, TelitView will limit data feed to the windows to minimize processing and graphics update, and allow the data to be saved into file in the maximum bandwidth that is offered by the PC.

TelitView User Guide changes or additions:

- 7.2.2   Logger Mode

3.1.2.   New MO-DR (3DR) Control Panel

Added a new MODR Control panel to support 3DR control and data display.

More specifically the new user interface items are highlighted as the following:

- Dials and other gadgets to display GNSS speed, DR speed, GNSS course, DR course
- GNSS and DR navigation and calibration status flags
- MODR sensor installation setup view
- IMU1T data view
- IMU & Barometer data view
- DR reset command

The support for the Telit proprietary MO-DR messages:

- PTWSIMU,RAW

- PTWSBARO,RAW

- PTWSDR,STATE

TelitView User Guide changes or additions:

- 6.4   Mo_DR Control Panel

3.1.3.   Setup Information in Data Log File

Every time TelitView starts to log data to file, it will also save the firmware version strings from the receiver, along with other supplementary information, to provide the traceability of test setup in a log file.

- Log type – the "All serial" data or "NMEA message" data

- Firmware version string – the SDK version and Telit GNSS version, where it is applicable

- Logger mode – it is ON or OFF

An example of a Setup Info Block is illustrated as the following:

```
*********** Setup Info Block ************
TelitView: TelitView 2.1.5
Log type: All serial data
Firmware-SDK ID:   $PMTK705,AXN_3.810_3333_16030200,0000,,1.0*35
Firmware-Telit ID: $PTWS,VERSION,VAL,v13-3.8.10-STD-2.2.0-N96-B2*3C
Logger mode: OFF
**************************************
```

TelitView User Guide changes or additions:

- 7.2.4   Setup Information in Log File

3.2.   General Enhancements & Bug Fixes

Change Request ID	Description
	2.2.1. Bug fix: Window state check. Handle the data feed more discretionarily if an open window is minimized.

Change Request ID	Description
	2.2.2. Bug fix: Log of all serial data When logging data to file in "all serial" type, binary data will be saved properly.
	2.2.3. Bug fix: Initialization of nav second in the LoopIt Test. Initialization of Nav Second.
	2.2.4. Bug fix: Case Sensitivity of Checksum Corrected the case sensitivity for the checksum in NMEA sentences
	2.2.5. Bug fix: Improved the reliability of when plots are cleared. These cases include a restart command, the change of constellation, etc.
	2.2.6. Bug fix: Incorrect popup message box for SetIEEmulation
	2.2.7. Bug fix: Corrected command sequence for auto-changing baud-rate (STM modules only)
	2.2.8. Bug fix: Change the data type in IMU1T UTC to string type
	2.2.9 Bug fix: Incorrect popup message box for session ID when TelitView runs for first time on a machine
	2.2.10. Bug fix: Set reference position Set reference position for the first time when TelitView runs for the first time on a machine
	2.2.11. Enhancement in data handling efficiency Enhancement in the proficiency of data feed handling to avoid the loss of data
	2.2.12. Applicable Product List Update

3.2.1.   Bug Fix: Window state check

Handle the data feed more discretionarily if an open window is minimized.

3.2.2.   Bug Fix: Log of all serial data

When logging data to file in "all serial" type, binary data will be saved properly.

3.2.3.   Bug Fix: Initialization of Nav second

LoopIt Test: the nav seconds of random value in LoopIt Test should be initialized at the start of the test.

3.2.4.   Bug Fix: Case sensitivity of checksum

Fixed the bug sensitivity case in checksum values in NMEA messages.

3.2.5.   Bug Fix: Improved the reliability of when plots are cleared

These cases include a restart command, the change of constellation, etc.

3.2.6.   Bug Fix: Incorrect popup message box for SetIEEmulation

Fixed the bug error message box for SetIEEmulation complaint.

3.2.7.   Bug Fix: Command sequence for suto-shanging baudrate

Corrected command sequence for auto-changing baud-rate (STM modules only).

3.2.8.   Bug Fix: Change the data type in IMU1T UTC

Change the data type in IMU1T UTC to string type

3.2.9.   Bug Fix: Incorrect popup message box for session ID

Corrected error complaint when TelitView runs for first time on a machine.

3.2.10.   Bug Fix: Set reference position

Set reference position for the first time when TelitView runs for the first time on a machine

3.2.11.   Enhancement in data handling efficiency

Enhancement in the proficiency of data feed handling to avoid the loss of data.

3.2.12.   Applicable product list update

The Applicability Table is updated to include new products that are supported with the TelitView 2.1.5 Release.

page 12 of 17
Mod. 0811 2014-10 Rev.2

4.   Delta Software from 2.1.3 to 2.1.4

4.1.   New Features

Change Request ID	Description
	3.1.1. Support for GNSS Galileo System
	2.1.2. MEMS-Only DR (Dead Reckoning)

4.1.1.   Support for GNSS Galileo System

TelitView contains the support for the Galileo system in GNSS in the Navigation States window, SignalQuality view, and AzimuthElevation view.

TelitView User Guide changes or additions:

- 5.2   Navigation State Window
- 5.4.2   Satellite Tracking States
- 9.1.4   GNSS Signal Chars: GPS + GALILEO

4.1.2.   MEMS-Only DR (Dead Reckoning)

The newly added MO-DR window provides the following user interface features for MEMS-Only DR:

- The control panel

- The DR status display

- The display for Telit proprietary IMU1T data display

TelitView User Guide Additions:

- 6.4   MO-DR Control Panel

4.1.2.1.   MEMS-Only Gyro Data Display

TelitView User Guide Additions:

- 6.4.1   MEMS-Only-Gyro Data Display

4.2. General Enhancements

ID	Description
	2.2.1. Product Identification
	2.2.2. Replay File
	2.2.3. Display Average CNo Values
	2.2.4. Display Error Stats
	2.2.5. NMEA Version 4.10 compatible

4.2.1. Product Identification

Changed the Production Selection user interface.

Product selection has been noticeably enhanced. Now there are two methods provided for the user to make selections:

1)   Module type – the names of Telit GNSS Modules (shown in the left side box)

2)   Chipset type – the names of the GNSS chipsets that are found in modules (shown in the right side box).

TelitView User Guide Additions:

- 7.1   Identify Product

4.2.2. Replay File

The log file replay has the following enhancement, and eliminated the reading flaw that resulted in the gaps between read after a pause.

- The read is synchronized with the GPRMC on the second mark.
- Enhanced the "Fast" speed read by adding the 2nd "Fast" to read at 10 times fast as the normal speed.

TelitView User Guide Additions:

- 6.1.2   Control the Speed for Replay

4.2.3. Display Average CNo Values

The Signal Quality window now has a new field that display the average signal level (CNo) on the current epoch.

The Data Charts window contains new display for the average signal level (CNo) as a trace on time update. When selected, the signal level will be displayed and updated as the time goes on. This display is user-selectable and is a default set by design.

TelitView User Guide Additions:

- 5.4   Signal Quality
- 5.8   Data Chart

4.2.4.   Display Position Error Stats (CEP, Bias)

The Scatter Plot window now has a new field that display the CEP (Circular Error Probability) value.

The same plot window also contains display the TelitView's processing of data and the offset , or bias, that has been calculated by TelitView, to the Easting and Northing direction, respectively.

TelitView User Guide Additions:

- 5.6   Scatter Plot

4.2.5.　　NMEA Version 4.10 Compatible

TelitView is compatible with the NMEA version 4.10.

It means that the sentences of NMEA version 4.10 are not necessarily fully implemented or used in the TelitView's message handling, the sentences pertaining to the version will not interfere with the normal operation of the software.

Mod. 0811 2014-10 Rev.2

5.   Document History

Revision	Date	Changes
Rev 0	2015-08-05	First Issue - Delta Software from 2.1.2 to 2.1.3
Rev 1	2016-02-22	Software Description (Version 2.1.4)
Rev 2	2016-11-30	Software Description (Version 2.1.5)
Rev 3	2016-12-16	Software Description (Version 2.1.6)