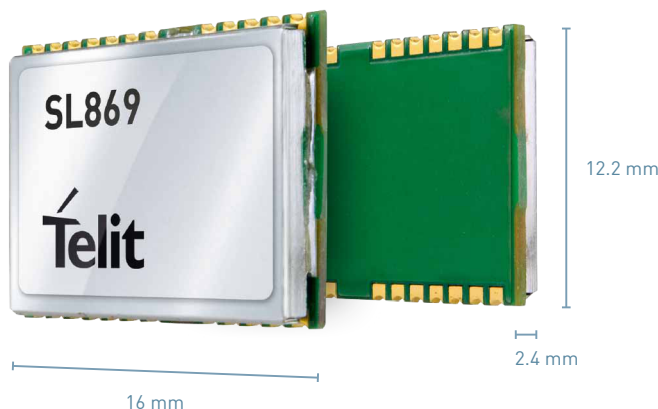




## JUPITER SL869 Series

GNSS Standalone

**GNSS** Embedded



### Product Description

The Jupiter SL869 offers the best multi-constellation coverage solution in the same form factor and compatible pin-out as the Jupiter JN3. It can therefore function as a top level, extension replacement at a reduced integration cost. The SL869 can easily replace JN3 in all bundled cellular plus positioning solutions when high-level features like: multi-constellation, Dead Reckoning or Timing are required.

The SL869 product series: SL869, SL869-T and SL869-DR offers default configurations to meet specific market needs.

As a the **Standard GNSS Module**, the SL869 offering high sensitivity, low power consumption, jamming immunity and fast time to first fix.

As a **Timing Module**, the SL869 provides best-in-class timing performance with an extremely stable synchronized 1PPS output and TRAIM (Time-Receiver Autonomous Integrity Monitor) integrity monitoring.

As a **DR Module**, the SL869 receiver provides the user with accurate estimates of vehicle's position and velocity when GNSS information is lost or not available by combining speed and heading sensor data into the solution. The result is improved navigation in harsh urban canyon environments.

### Key Features

- Based on the STM Teseo II core
- GNSS supported: GPS L1, GLONASS L1, Galileo E1
- 16 x 12.2 x 2.4 mm LLC package
- Supply voltage range: 3 - 3.6 VDC
- High RF sensitivity and Jamming detection/removal
- Assisted GPS
- 10Hz Navigation, SBAS, TRAIM, 1PPS
- Ports: UART, I2C, USB, CAN Bus interfaces

### Key Benefits

- Multi-constellation allows accurate navigation in hash environments such as urban canyons
- The SL869 supports AGPS by means of Extended Ephemeris injection as well as Extended Ephemeris on-board generation for fastest TTFF
- Dead Reckoning support allows easy integration with MEMS using I2C and CAN bus
- Compatible with JN3 and popular 12x16mm footprint industry standard

### Family Concept

The xL869 is Telit's GNSS Unified Form Factor family which allows customers to select among different GNSS technologies. Modules in this family are offered in a 16 x 12.2 mm, 24-pad, LCC package supporting GPS, GLONASS, Galileo, and QZSS constellations.

Our positioning product portfolio is the result of over twenty years of experience in GNSS applications. Telit has developed a range of products compatible with the wellknown GPS constellation as well as its Russian counterpart GLONASS. Moreover, our portfolio is fully aligned with the upcoming service launch of Europe's Galileo constellation. Valuable features such as Dead Reckoning, Precision Timing, as well as speed and reliability assured by multiconstellation coverage, provide additional benefits for your application.

Your application development effort can also benefit significantly from the seamless integration between Telit's cellular and positioning modules. This bundling of cellular and positioning modules significantly reduces development complexity without adding costs. Multi-constellation positioning products applied together with our eCall / ERA-GLONASS compliant cellular modules bring you ready-to-use emergency automotive tracking solutions for the European and Russian markets.

Typical applications include fleet management systems, European GPS-assisted road tolling systems, cellular base stations, in-car navigation systems, automotive telematics systems, and GPS-based personal sports training monitors.

**Combine your GNSS module with**

Cellular modules



Short Range modules



[www.telit.com](http://www.telit.com)

	Constellations					Voltage (V)		interfa Ces				f eatures			
	GPS	GLONASS	Galileo	QZSS	BDS	1.8	3.0	CAN	UART	I2C	USB	DR	Timing	DGPS	Flash
sl 869	•	•	•	•			•		•	•	•			•	•
sl 869-DR	•	•	•	•			•	•	•	•	•	•		•	•
sl 869-T	•	•	•	•			•		•	•	•		•		•

## JUPITER SL869 Series

GNSS Standalone

### Product Features

- Frequency Band: GPS (L1), GLONASS (L1, FDMA), Galileo (E1)
- Standards: NMEA, RTCM 104
- 32 Channel GNSS architecture
- Positional Accuracy (CEP50): 1.5 m
- Time To First Fix (@ -130 dBm)
  - Hot Start: 1 s
  - Cold Start: < 35 s
- A-GPS: local ephemeris prediction
- A-GPS: server predicted ephemeris
- Jammer rejection

### Electrical & Sensitivity

- Current consumption
  - Acquisition: 67mA (GPS+GLO)
  - Tracking: 42mA (GPS+GLO)
  - Low power Nav: 23mA (GPS+GLO)
  - Standby: 73uA
- Power supply
  - VCC: 3.0 - 3.6 V
  - Battery: 2.5 - 3.6 V
- Sensitivity
  - Acquisition: -146 dBm
  - Navigation: -158 dBm
  - Tracking: -162 dBm

### Environmental

- Dimensions: 16 x 12.2 x 2.4 mm
- Weight: 1.8 g
- 24-pad LCC package
- Temperature Range
  - Operating temperature: -40 to +85°C
  - Storage temperature: -40 to +85°C

### Interfaces

- UART
- 1PPS for precise timing
- EGNOS, WAAS and MSAS
- USB
- 2nd UART for debug/DGPS
- CAN BUS
- I2C

[09.2015]

Telit reserves all rights to this document and the information contained herein. Products, names, logos and designs described herein may in whole or in part be subject to intellectual property rights. The information contained herein is provided "as is". No warranty of any kind, either express or implied, is made in relation to the accuracy, reliability, fitness for a particular purpose or content of this document. This document may be revised by Telit at any time. For most recent documents, please visit [www.telit.com](http://www.telit.com). Copyright © 2015, Telit

\* Copyright © 1990-2015, Python Software Foundation



### Join the Telit Technical Forum

For a quicker and more rewarding integration experience join the Telit Technical Forum. There you can browse the first open forum covering all IoT topics, get direct support by region (EMEA, North America, Latin America, APAC), take part in this quickly growing IoT community and exchange experiences.

Telit Communications S.p.A.  
Via Stazione di Prosecco, 5/B  
I-34010 Sgonico (Trieste), Italy  
**Phone** +39 040 4192 200  
**Fax** +39 040 4192 383  
**E-Mail** [EMEA@telit.com](mailto:EMEA@telit.com)

Telit Wireless Solutions Inc.  
3131 RDU Center Drive, Suite 135  
Morrisville, NC 27560, USA  
**Phone** +1 888 846 9773 or +1 919 439 7977  
**Fax** +1 888 846 9774 or +1 919 840 0337  
**E-Mail** [NORTHAMERICA@telit.com](mailto:NORTHAMERICA@telit.com)

Telit Wireless Solutions Inc.  
Rua Paes Leme, 524, Conj, 126  
05424-101, Pinheiros  
São Paulo-SP-Brazil  
**Phone** +55 11 3031 5051  
**Fax** +55 11 3031 5051  
**E-Mail** [LATINAMERICA@telit.com](mailto:LATINAMERICA@telit.com)

Telit Wireless Solutions Co., Ltd.  
8th FL., Shinyoung Securities Bld.  
6, Gukjegeumyung-ro8-gil, Yeongdeungpo-gu  
Seoul, 150-884, Korea  
**Phone** +82 2 368 4600  
**Fax** +82 2 368 4606  
**E-Mail** [APAC@telit.com](mailto:APAC@telit.com)

**www.telit.com**

 [www.telit.com/techforum](http://www.telit.com/techforum)  
 [www.telit.com/facebook](http://www.telit.com/facebook)  
 [www.telit.com/twitter](http://www.telit.com/twitter)