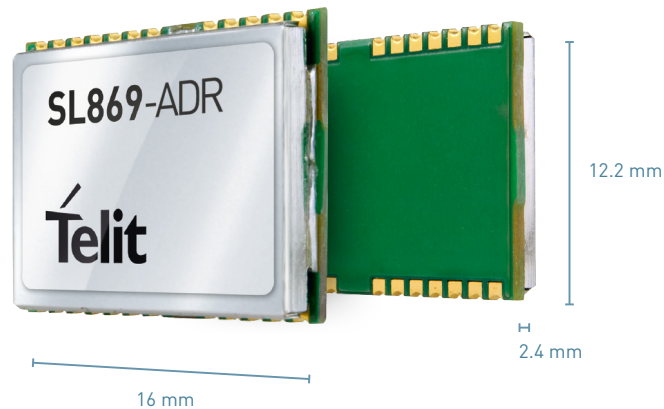


JUPITER SL869-ADR

GNSS Standalone

GNSS Dead Reckoning Embedded



Product Description

The Jupiter SL869-ADR is a new representative of the Telit Dead Reckoning Family. SL869-ADR is equipped with Automotive Dead Reckoning software, embedded 6-axis sensor MEMS and a new powerful core. Whenever GNSS coverage is missing or compromised, the SL869-ADR receiver provides the host application with accurate estimates of vehicles or moving device's position and velocity by combining speed and heading data coming from internal sensors with odometer data coming from the car.

The embedded 6-axis MEMS sensor makes the integration into the navigation system straightforward. Dead Reckoning boosts the accuracy in areas with adverse GNSS conditions like urban canyons, tunnels, parking garages, etc. When GNSS coverage is lost, the DR software fills in the gaps.

The SL869-ADR is able to track GPS, Glonass, Beidou and Galileo constellations and supports A-GNSS onboard generation as well as A-GNSS server-generated file injection.

The SL869-ADR supports three dimensional dead Reckoning (3D DR). 3D DR provides an accurate gap-free solution in X,Y and Z allowing to navigate the most difficult conditions including multi-level parking.

The SL869-ADR is the perfect solution for the most demanding Automotive and Telematics applications.

Key Features

- GPSS, GLONASS, Galileo, and Beidou
- 16 x 12.2 x 2.4 mm LLC package
- Supply voltage range: 3 - 3.6 VDC
- 6-axis embedded MEMS sensor
- Assisted GPS
- 10Hz Navigation, SBAS, 1PPS
- UART, I²C
- Wheel tick (Odo) input
- Reverse input

Key Benefits

- Multi-constellation allows accurate navigation in harsh environments such as urban canyons
- A-GPS support via Extended Ephemeris injection as well as Extended Ephemeris on-board generation for fastest TTFF
- Straightforward integration thanks to a self-contained solution with embedded MEMS
- Compatible with JN3 and popular 12 x 16 mm industry standard footprint

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 well-known 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 multi-constellation 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 / ERAGLONASS 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



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JUPITER SL869-ADR

Product Features

- Frequency Bands: GPS (L1), GLONASS (L1, FDMA), Galileo (E1), BeiDou (B1)
- Standards: NMEA, RTCM 104
- 48 Channel GNSS architecture
- Positional Accuracy (CEP50): 1.3 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
- 3D Automotive Dead Reckoning
- Embedded 6-axis MEMS sensor (3D Gyro + 3D Accelerometer)
- ODO (Wheel Tick pulse) input
- Reverse input

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

- 3 UARTs
- 1PPS
- EGNOS, WAAS and MSAS
- I²C

Electrical & Sensitivity

- Current consumption
 - Acquisition: 188mW (GPS+GLO)
 - Tracking: 158mW (GPS+GLO)
 - Hibernate: 221uW
- Power supply
 - VCC: 3.0 - 3.6 V
 - Battery: 2.5 - 3.6 V
- Sensitivity
 - Acquisition: -147 dBm
 - Navigation: -158 dBm
 - Tracking: -162 dBm

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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

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

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

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

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