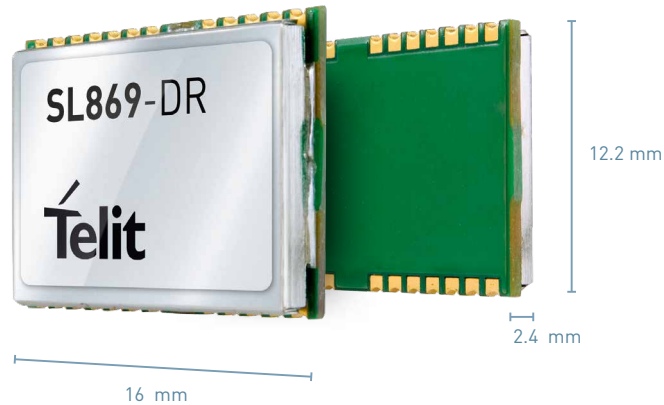


● ● **JUPITER SL869-DR**  
GNSS Standalone

**GNSS** Embedded



## Product Description

The Jupiter SL869-DR is a variant of the SL869 equipped with Dead Reckoning software and dedicated I/Os to connect the external sensors required to continuously compute and output a reliable PVT solution.

Whenever GNSS coverage is missing or compromised, the SL869-DR receiver provides the host application with accurate estimates of vehicle's or moving device's position and velocity by combining speed and heading sensor data into the solution.

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, whereas when there is a weak signal condition, input from the sensors help smooth out the GNSS noise when entering or exiting harsh environments.

The SL869-DR is able to track GPS and Glonass constellations and is Galileo ready. Its dead reckoning algorithm supports 3D Gyro, 3D accelerometer and Odometer inputs. It also supports A-GNSS onboard generation as well as A-GNSS server-generated file injection.

The SL869-DR provides a proven gap-free navigation solution that compensates for possible difficult GNSS conditions for different applications like Automotive, telematics, aftermarket, and fleet tracking.

## Key Features

- Dead Reckoning software
- GNSS support for: 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, 1PPS
- UART, I2C, USB, CAN Bus interfaces

## Key Benefits

- Multi-constellation allows accurate navigation in harsh environments such as urban canyons
- AGPS support via Extended Ephemeris injection as well as Extended Ephemeris on-board generation for fastest TTFF
- Dead Reckoning support allows easy integration with MEMS using I2C
- Compatible with JN3 and popular 12x16mm 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 / 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



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ONE SHOP. NOW, INNOVATE!**



## ●● JUPITER SL869-DR GNSS Standalone

### Product Features

- Frequency Band: GPS (L1), GLONASS (L1, FDMA), Galileo (E1)
- Standards: NMEA, RTCM 104, QZSS L1
- 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
- Dead Reckoning software
- 3D Gyro input
- 3D Accerometer input
- 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

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

### 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



### 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 m2m topics, get direct support by region (EMEA, North America, Latin America, APAC), take part in this quickly growing m2m community and exchange experiences.

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