

# JUPITER SL869 V2S Series

GPS Module

GPS Embedded



## Product Description

The Jupiter SL869 V2S is a GPS module based on the low-power consumption Mediatek MT3337 core.

SL869 V2S shares the classic SL869's 12.2 x 16 mm form factor and has been designed to be p2p compatible with Telit JN3/SL869 family.

The SL869 V2S allows customers to design once, select and mount the JN3, SL869 or SL869 V2 depending on required features.

The highest commonality family is with SL869 V2. In fact, the SL869 V2S is designed to share the same protocol of SL869 V2 allowing a simple migration between the full GNSS variant SL869 V2 and the GPS variant SL869 V2S. SL869 V2 supports GPS and QZSS L1. Position data is delivered using NMEA protocol through a standard UART. The SL869 V2S can replace the JN3, SL869 and especially the SL869 V2 in device designs with the observance of a few simple application rules. It supports ephemeris file injection (A-GPS) as well as Satellite Based Augmentation System (SBAS) to increase position accuracy. Its onboard software engine is able to locally predict ephemeris three days in advance starting from ephemeris data broadcast by GNSS satellites, received by the module and stored in the host flash memory.

## Key Features

- Based on the Mediatek MT3337 core
- GNSS standards and bands supported: GPS L1
- 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
- Default 1 Hz up to 10 Hz Navigation, SBAS, QZSS, 1PPS
- Ports: UART

## Key Benefits

- Low power navigation allows the best balance between accuracy and battery life
- AGPS by means of Extended Ephemeris injection as well as Extended Ephemeris on-board generation provides for faster TTFF
- Compatible with the JN3 and SL869 in popular
- 12 x 16 mm 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 well-known GPS constellation as well as its Russian counterpart Glonass QZSS, and ready for Galileo and Compass/Beidou. Valuable features such as Dead-reckoning, Precision Timing, as well as speed and reliability ensured by simultaneous multi-constellation navigation, provide additional benefits to 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. Multiconstellation positioning products applied together with our eCall / ERAGLONASS compliant cellular modules can 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, cellular base stations, in-car navigation, automotive telematics, and GPS-based personal sports training monitors.

Combine your GNSS module with

Cellular modules



Short Range modules



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GPS Module

## Product Features

- Standards: NMEA
- 66 acquisition channels
- Positional Accuracy (CEP50): 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
- EGNOS, WAAS and MSAS

## Electrical & Sensitivity

- Current
  - Acquisition: typ 27 mA
  - Tracking: typ 24 mA
  - Standby: < 6.5 uA
- Power supply
  - VCC: 3.0 - 3.6 V
- Sensitivity
  - Acquisition: -146 dBm
  - Navigation: -163 dBm
  - Tracking: -165 dBm

## Environmental

- Dimensions: 16 x 12.2 x 2.4 mm
- Weight: 1 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



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