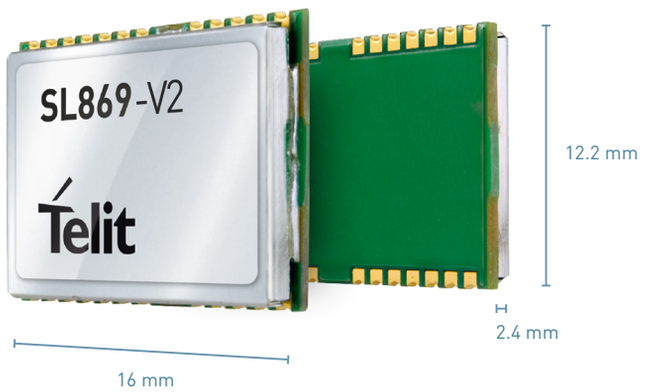
JUPITER **SL869**-V2

GNSS Embedded



Product Description

The Jupiter SL869-V2 is a member of the SL869 family based on the low-power Mediatek MT3333. It features easy integration and superior battery-life performance. The receiver is designed for applications not requiring TRAIM or dead reckoning support; USB or CAN connection. The SL869-V2 allows customers to design once, select and mount the JN3, SL869 or SL869-V2 depending on required features. It supports GPS, QZSS, Glonass and Compass/ BeiDou and is ready for Galileo. Position data is delivered using NMEA protocol through a standard UART.

The SL869-V2 can replace the JN3 or SL869 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 internal Flash memory.

Key Features

- Based on the Mediatek MT3333 core
- GNSS standards and bands supported: GPS L1, GLONASS L1, Galileo E1, BeiDou B1
- 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

- Multi-constellation allows accurate navigation in obscuring environments such as urban canyons
- A-GPS 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 SL869 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, BeiDou/Compass 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. Multi-constellation positioning products applied together with our eCall / ERA-GLONASS compliant cellular modules can bring you readyto-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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ENABLING THE IOT
IS WHAT WE DO.

Model	Constellations				Power Consumption		Interfaces	Features					Sensitivity	
	GPS/ QZSS	GLO	Gal	BDS	Acq (mW)	Track (mW)	Serial Port	LNA	DC block	Ant ON	Ant sense	Flash	Acq	Trak
SL869L-V2	•	•	•	•	**86**	**80**	**UART + I2C**	•	•	•	•	•	**-148**	**-162**
SL869-V2	•	•	•	•	103	81	UART					•	-145	-161
SL869L-V2S	•				**56**	**53**	**UART + UART**	•	•	•			**-148**	**-162**
SL869-V2S	•				74	64	UART						-144	-160

JUPITER **SL869** V2 Series

Product Features

- Frequency Bands: GPS (L1), GLONASS (L1, FDMA), Galileo (E1), BeiDou (B1)
- Standards: NMEA
- 33 track verification channels
- Positional Accuracy (CEP50): 2.5 m
- Time To First Fix (@ -130 dBm)
  - Hot Start: 1 s
  - Cold Start: < 28 s
- A-GPS: local ephemeris prediction
- A-GPS: server predicted ephemeris
- Jammer rejection
- EGNOS, WAAS and MSAS

Electrical & Sensitivity

- Current
  - Acquisition: typ 103 mW (GPS+GLO)
  - Tracking: typ 81 mW (GPS+GLO)
  - Backup: 22uW
- Power supply
  - VCC: 3.0 - 3.6 V
- Sensitivity
  - Acquisition: -145 dBm
  - Navigation: -158 dBm
  - Tracking: -161 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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