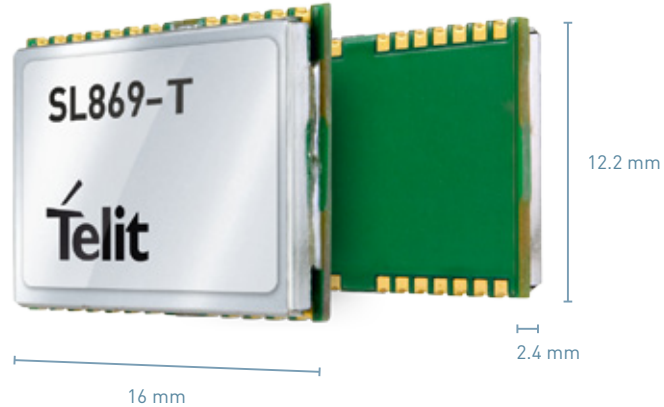


JUPITER SL869-T Series

GNSS Standalone

GNSS **Timing** Embedded



Product Description

The Jupiter SL869-T is a special Timing variant of the well-known SL869 Family that provides an accurate time reference even with only one visible satellite. SL869-T is able to track GPS, GLONASS and is Galileo ready. The SL869-T has best in class 1PPS output with 20ns accuracy over 24H and is able to compensate the error introduced by the length of the RF cable. The PPS (Pulse Per Second) output of GNSS receivers is often used as synchronization source in several applications like cellular communication and real time systems. The PPS accuracy could, under certain conditions, be not good enough or could be affected by a clock error coming from unhealthy satellites. The SL869-T is provided with a TRAIM (Time Reference Algorithm Integrity Monitor) algorithm that allows to remove the satellites not providing a good clock reference from those used to compute the time base. SL869-T is the best solution for Time sensitive applications and is able to output a high quality PPS with 2 satellites in visibility and keep PPS output with only 1 satellite.

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
- Timing accuracy : <20nsec over 24hr period
- TRAIM – Timing Receiver Autonomous Integrity Monitoring
- 1PPS accuracy with only one satellite
- Self Survey Mode : Receiver optimize measurements for the time calculation
- Compensation for cable delay

Key Benefits

- Multi-constellation provide multiple sources of Timing information
- The ability to identify, isolate and remove satellites that may have issues
- 1PPS accuracy with only one satellite
- Receiver will enter a position hold mode thus optimizing measurements for the calculation of time
- The ability to compensate for RF cable loss by advance or delay in the 1PPS

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



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	CONSTELLATIONS					VOLTAGE (V)		INTERFACES				FEATURES			
	GPS	GLONASS	Galileo	QZSS	BDS	1.8	3.0	CAN	UART	I2C	USB	DR	Timing	DGPS	Flash
SL869	•	•	•	•			•		•	•	•			•	•
SL869-DR	•	•	•	•			•		•	•	•	•		•	•
SL869-T	•	•	•	•			•		•	•	•		•		•

JUPITER SL869-T 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
- Special Timing capability
- TRAIM

Electrical & Sensitivity

- Current consumption
 - Acquisition: 67mA (GPS+GLO)
 - Tracking: 42mA (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
- I2C



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.