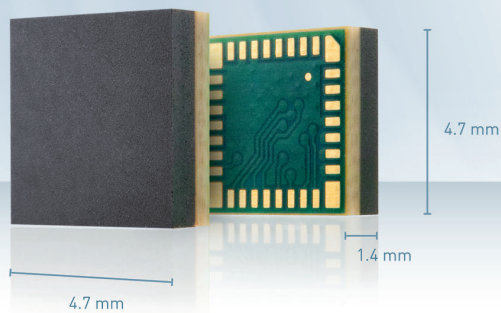


## ●● JUPITER SE 880 GPS Module



### Product Description

The Jupiter SE880 is Telit's ultra-compact GPS receiver module for applications in the commercial, industrial, and consumer segments including wearable and handheld devices. The miniature 4.7x4.7mm QFN (Quad-Flat No-leads), SiRFstarIV™-based receiver module employs leading 3-D component embedding technology to achieve best-in-class performance in all dimensions critical for regular or size-constrained GPS applications.

The SE880 receiver module was conceived to shorten Time-to-Market and to make the chipset-versus-module decision an easy one for you to make.

Your application development effort can also benefit significantly from the seamless integration between Telit's 2G 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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### Key Benefits

- Supports AGPS using Extended Ephemeris injection as well as Extended Ephemeris on-board generation for fastest TTFF
- Easy integration in cellular/GNSS bundle solutions combined with Telit cellular modules
- Miniature 4.7x4.7mm QFN form factor for compact devices and wearable technology
- Ultra sensitive receiver for challenging environments such as urban canyons

### Family Concept

Our positioning product portfolio is the result of over twenty years of experience in GPS 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.

ONE STOP.  
ONE SHOP. NOW, INNOVATE!



## ●● JUPITER SE 880 GPS Module

### Product features

- Frequency Band: GPS L1 Band, C/A Code
- Standards: NMEA
- 48 Channel GPS architecture
- Positional Accuracy (CEP50): Autonomous Positional Error < 1.8 m
- Accuracy
  - Speed: < 0.01 m/s
  - Heading: < 0.01 deg
- Time To First Fix (90% @ -130 dBm)
  - Hot Start: 1 s
  - Cold Start: < 35 s
- Direct couple to passive antenna
- 1 SV Fast Time Setting
- Internal LDO and Switcher mode
- EGNOS, WAAS, GAGAN and MSAS capability embedded with correction of positional errors due to ionospheric and orbital disturbances
- Data logging
- Micro Power Management mode maintaining HOT Start conditions with average of 50–500uA current consumption

### Environmental

- Dimensions: 4.7 x 4.7 x 1.4 mm
- Weight: 0.08 g
- 34-pad QFN package, requiring wonly 2 Layer PCB
- Temperature Range
  - Operating temperature: -40 to +85°C
  - Storage temperature: -40 to +85°C"

### Interfaces

- UART, SPI and I2C interfaces
- PPS for precise timing
- SPI Flash interface
- TCXO interface supporting both dedicated TCXO and clock sharing
- RTC for efficient power management  
Additional features
- A-GPS: ephemeris file injection

### Electrical & Sensitivity

- Current consumption
  - Hibernate Mode current: 14 uA
  - Low power mode (Tracking 1 Hz): 10 mA
  - Average Full power Tracking in LDO mode: 35 mA
  - Average Full power Tracking in switcher mode: 28 mA
- Power supply 1.8 V
- Sensitivity
  - Acquisition: -148 dBm
  - Navigation: -163 dBm
  - Tracking: -165 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.