







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 Noleads), SiRFstarIVTM-based receiver module employs leading 3-D component embedding technology to achieve best-inclass performance in all dimensions critical for regular or size-constrained GPS applications.

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

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.

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







www.telit.com





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

Telit reserves all rights to this document and the information contained herein. Products, names, logos and designs described herein may in whole or in part be subject to intellectual property rights. The information contained herein is provided "as is". No warranty of any kind, either express or implied, is made in relation to the accuracy, reliability, fitness for a particular purpose or content of this document This document may be revised by Telit at any time. For most recent documents, please visit www.telit.com Copyright © 2013, Telit

* Copyright © 1990-2013, Python Software Foundation



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.

Telit Communications S.p.A. Via Stazione di Prosecco, 5/B I-34010 Sgonico (Trieste), Italy

Phone +39 040 4192 200 Fax +39 040 4192 383 E-Mail EMEA@telit.com Telit Wireless Solutions Inc. 3131 RDU Center Drive, Suite 135 Morrisville, NC 27560, USA

Phone +1 888 846 9773 or +1 919 439 7977
Fax +1 888 846 9774 or +1 919 840 0337
E-Mail NORTHAMERICA@telit.com

Telit Wireless Solutions Inc. Rua Paes Leme, 524, Conj, 126 05424-101, Pinheiros, Sao Paulo-SP-Brazil

Phone +55 11 3031 5051 Fax +55 11 3031 5051 E-Mail LATINAMERICA@telit.com Telit Wireless Solutions Co., Ltd. 12th Fl., Shinyoung Securities Bld. 34-12, Yeouido-dong, Yeongdeungpo-gu Seoul, 150-884, Korea

Phone +82 2 368 4600 Fax +82 2 368 4606 E-Mail APAC@telit.com



www.telit.com/twitter