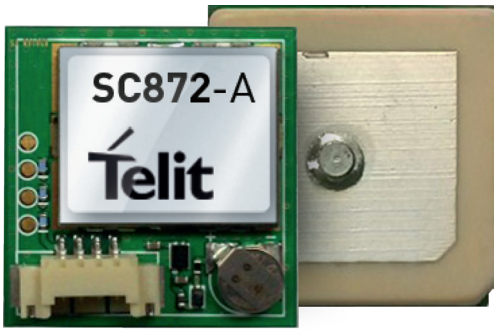
JUPITER **SC872**-A

GNSS Embedded



Product Description

The Jupiter SC872-A is a multi-constellation smart GNSS module with an embedded 20 x 20 mm antenna. The SC872-A is packaged in a 21 x 22 mm double-sided PCB with a GNSS antenna on one side and all the remaining components on the other. The SC872-A is provided with embedded Flash memory, integrated LNA, battery backup and a connector. This packaging solution provides customers with a completely integrated, top performing solution. The 20 x 20 mm antenna ensures high-quality performance over all the bands used by the different GNSS constellations. The embedded battery backup ensures top level TTFF performance and a 24/7 availability of a reliable time base. The embedded connector ensures easy and fast mounting / replacement.

The SC872-A is designed to fully support GPS, Glonass, QZSS and it is Galileo ready. It can track GPS+Glonass (and eventually Galileo) constellations simultaneously, providing the positioning data though a standard UART.

The Jupiter SC872-A 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 up to three days in advance a starting from ephemeris data broadcast by GNSS satellites received by the module and stored in the internal Flash memory.

The Jupiter SC872-A provides customers with a turnkey solution for applications requiring top ranked GNSS performance and ready-to-use solution like GPS Mouse, fleet tracking, anti-theft beacons, wired GNSS solutions.

Key Benefits

- Multi-constellation GNSS module with integrated high performance 20 x 20 mm antenna
- Compliant with GPS, Glonass and Galileo standards
- Plug&play use with embedded connector
- Ready for Galileo
- Low power processing core delivers current optimized multi-constellation tracking
- Ultra-sensitive -165 dBm (tracking) RF front-end
- Supports ephemeris file injection (A-GPS)
- Satellite Based Augmentation System (SBAS) compliant

Family Concept

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. Moreover, our portfolio is fully aligned with the upcoming service launch of Europe's Galileo constellation. Important features such as Dead Reckoning, Precision Timing, as well as speed and reliability are assured by multi-constellation coverage.

Your application development activity 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

www.telit.com

ENABLING THE IOT
IS WHAT WE DO.

JUPITER **SC872**-A

Product Features

- 4-pin connector
- Embedded 20 x 20 mm GPS+GLO+BDS antenna
- Frequency Bands: GPS L1, GLONASS L1, QZSS L1, Galileo E1
- Standards: NMEA
- Jamming rejection
- Data logging
- A-GPS: ephemeris file injection
- EGNOS, WAAS, GAGAN and MSAS capability embedded with correction of positional errors due to ionospheric and orbital disturbances

Environmental

- Dimensions: 21 x 22 x 8.5 mm
- Weight: 9.2 g
- Temperature range:
  - Operating temperature: -20 to +60°C
  - Storage temperature: -30 to +70°C

Interfaces

- UART

Approvals

- RoHS compliant
- R&TTE

Electrical & Sensitivity

- Current consumption
  - OFF ‹ 7 uA
  - Full power tracking: ‹ 27 mA (GPS+GLO)
  - Full power acquisition: ‹ 32 mA (GPS+GLO)
- Sensitivity
  - Acquisition: -148 dBm
  - Navigation: -163 dBm
  - Tracking: -165 dBm
- Power supply
  - Range from 3.3 up to 5 V
- Positional accuracy (CEP50):
  Autonomous Positional Error ‹ 3 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

[07.2015]

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.

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
São Paulo-SP-Brazil
Phone +55 11 3031 5051
Fax +55 11 3031 5051
E-Mail LATINAMERICA@telit.com

Telit Wireless Solutions Co., Ltd.
8th Fl., Shinyoung Securities Bld.
6, Gukjegeumyung-ro8-gil, Yeongdeungpo-gu
Seoul, 150-884, Korea
Phone +82 2 368 4600
Fax +82 2 368 4606
E-Mail APAC@telit.com

www.telit.com
www.telit.com/techforum
www.telit.com/facebook
www.telit.com/twitter