JUPITER JF2
GPS Module

GPS Embedded

JF2

Telit

11 mm

2.6 mm

11 mm
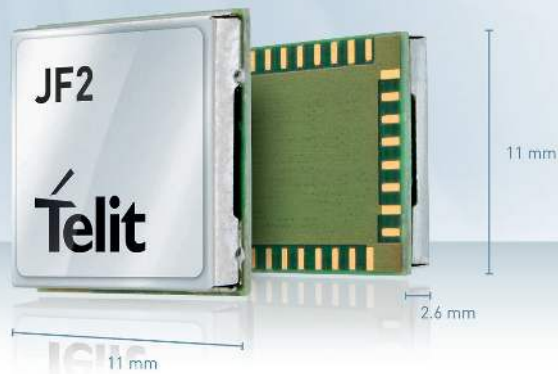
Product Description

The JF2 offers developers and integrators the smallest, completely integrated GNSS solution for positioning applications based on a 1.8V supply. It is fully interoperable with Telit cellular modules for a ready-to-use solution bundle with no additional integration effort or cost. The JF2 can be managed by an external microcontroller or by any of the Telit cellular modules.

Key features

• Based on the SiRFstarIV™core
• GNSS supported: GPS L1
• 11x11x2.6mm QFN package
• Flash, EEPROM or ROM based versions
• Assisted GPS
• High RF sensitivity with jamming detection and removal
• Supply voltage range: 1.79-1.9 VDC
• Advanced power modes
• Ports: 1PPS, UART, I2C and SPI

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 with Telit cellular modules

• GPS solution with embedded Flash: high performance, always up-to-date and lowest BOM cost and footprint

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. 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

• Short Range modules

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ONE STOP.
ONE SHOP. NOW, INNOVATE!

QUALITY
INVESTMENT PROTECTION
BUSINESS SCALABLE
EASE OF INTEGRATION

JUPITER **JF 2**
GPS Module

Product features

- Standards: NMEA and OSP
- 48 Channel GPS architecture
- Positional Accuracy (CEP50):
  Autonomous Positional Error < 2.5 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
- A-GPS: local ephemeris prediction
- A-GPS: server predicted ephemeris
  file injection

Environmental

- Dimensions: 11 x 11 x 2.6 mm
- Weight: 1 g
- 32-pad QFN package, requiring only
  2 layer PCB
- Temperature Range
  - Operating temperature: -40 to +85°C
  - Storage temperature: -40 to +85°C

Interfaces

- UART, SPI, I2C interfaces
- PPS for precise timing
- EGNOS, WAAS, GAGAN and MSAS capability
  embedded with correction of positional errors
  due to ionospheric and orbital disturbances
- RTC for efficient power management

Electrical & Sensitivity

- Current consumption
  - Hibernate Mode current: 14 uA
  - Low power mode (Tracking 1Hz): 10 mA
  - Full power Tracking: 37 mA
- Power supply
  - Range from 1.75 up to1.9 V
- Sensitivity
  - Acquisition: -147 dBm
  - Navigation: -160 dBm
  - Tracking: -163 dBm

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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.