JUPITER 130

Fully integrated 20-channel GPS antenna and receiver

Jupiter 130 adds an embedded antenna and built-in micro battery to the high performance GPS receiver module featuring the proven technology of the Jupiter 30 series from Navman Wireless. Both antenna and receiver functions are fully integrated, eliminating the need for an external RF antenna.

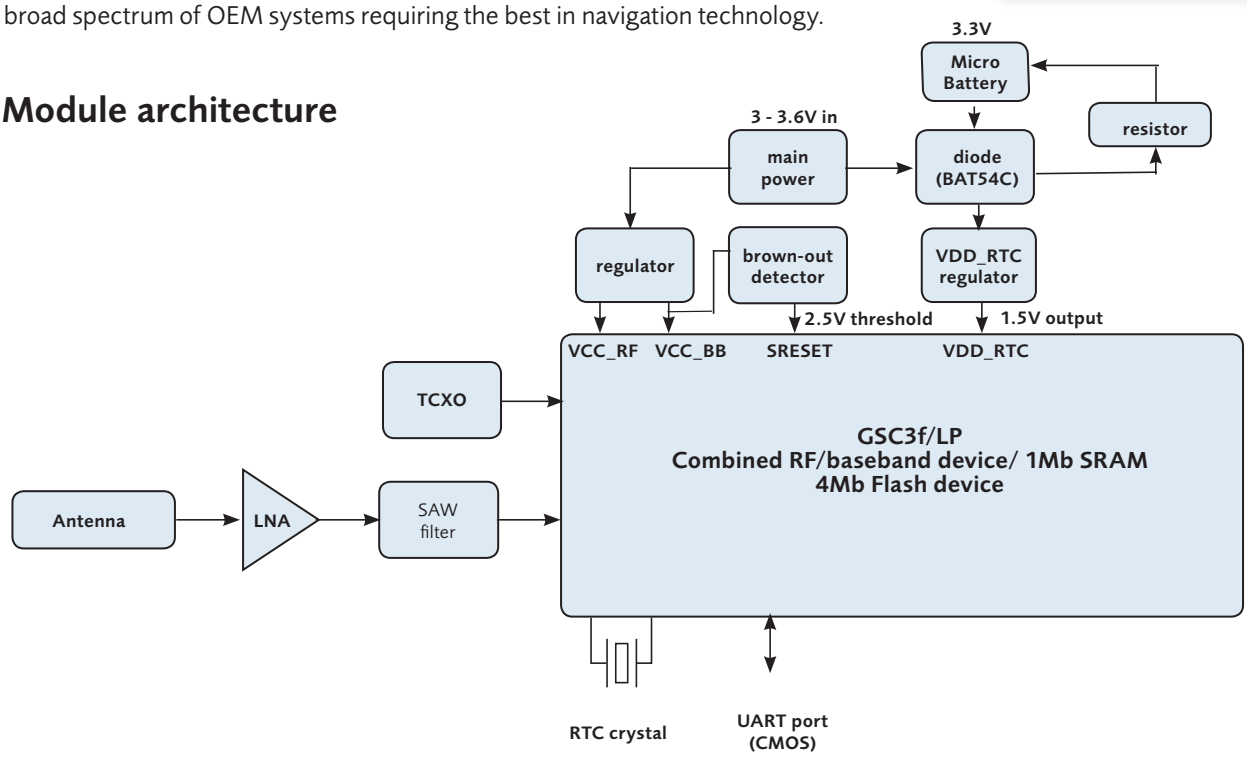
This module outperforms the competition in applications requiring rapid TTFF (Time to First Fix) and operation under low signal levels. Jupiter 130 offers faster acquisition, a wider operating voltage range and greater noise rejection using a design enhanced to take advantage of the SiRFStar III architecture.

The GPS smart antenna tracks up to 20 satellites at a time, providing superior performance even in the challenging environments of densely built cites, heavy foliage and enclosed spaces. Jupiter 130 is the high sensitivity GPS solution for the broad spectrum of OEM systems requiring the best in navigation technology.

Key Features

- embedded antenna, with ultra-high sensitivity 20-channel receiver
- faster times to fix under all conditions
- supports uploading of live Ephemeris providing <1s hot start performance
- user selectable SBAS (WAAS, EGNOS, MSAS)
- built-in micro battery to preserve system data for rapid satellite acquisition
- optional LED indicator for GPS fix
- environmentally friendly RoHS compliance

Module architecture



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Product specifications

Receiver antenna architecture
- fully integrated embedded antenna
- 20-channel, 200 000 effective correlators, L1 1575.42 MHz
- C/A code (1.023 MHz chip rate)
- code-plus-carrier tracking (carrier-aided tracking)
- acceleration to 4 G

Tracking Capability
- 20 satellites simultaneously

Accuracy
- horizontal accuracy: 2.5 m (CEP), 5.5 m 2dRMS
- velocity accuracy: speed <0.01 m/s; heading <0.01˚

Acquisition performance

Mode	@ –125 dBm	
	Typical	**90%**
hot start TTFF	500 ms	<1 s
warm start TTFF	31 s	36 s
cold start TTFF	33 s	38 s

Datums
- supports selection of datums, default: WGS-84

Environmental
- operating temperature: –10°C to +60°C
- humidity: 95% non-condensing
- altitude: –305 m to 18 000 m

Compliance
- Designed to FCC – Part 15, class B
- Designed to EN: 55022, class B
- RoHS

Physical
- dimensions: 30.0 x 30.0 x 8.0 mm

On-board filtering
- L1 –75 MHz, –30 dB
- L1 +50 MHz, –20 dB

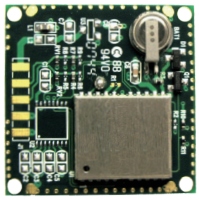
Data interfaces
- CMOS-level (3.3 VDC)
- selected NMEA-0183/SiRF binary messages: latitude, longitude, elevation, velocity, heading, time, satellite tracking status, command/control messages
- SiRF binary data interface

Electrical
- input power range: 3.3 VDC - 0.3/ + 0.3 VDC
- on board battery back-up for SRAM and RTC

Mode	**3.3V**
average sustained power (after 1st solution)	152 mW

Related documents
- LA000667 Jupiter 130 data sheet

Ordering information
- AAA005000-G Jupiter 130



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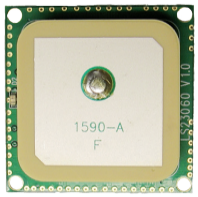

Antenna

Contact your local distributor or Navman Wireless OEM:

www.navmanwireless.com/oem