NAVMAN WIRELESS

Jupiter 32 xLP

Extra Low Power Miniature 20-channel receiver module

Key Features

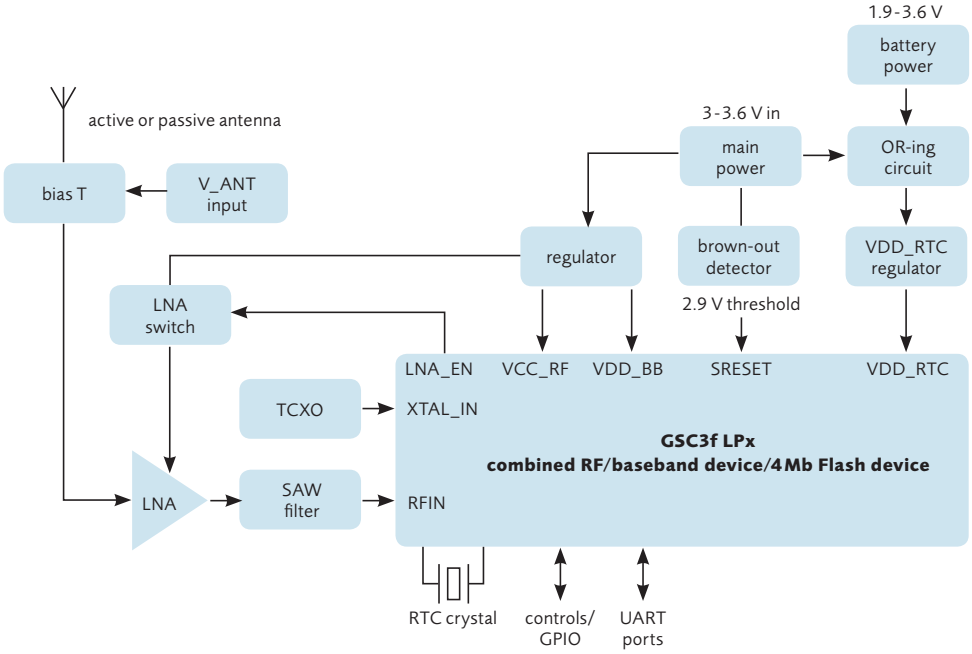
- 30% less power consumption than the previous Jupiter 32
- ultra-high sensitivity, with faster times-to-fix under all conditions
- 200,000 effective correlators allows for improved indoor fixes and tracking
- Supports uploading of live Ephemeris providing <1s hot start performance
- Selectable User Profiles with ability to save configuration to Flash
- 0.5 PPM TCXO for optimal performance
- integral LNA with low power control
- user selectable SBAS (WAAS, EGNOS and MSAS) support
- environmentally friendly RoHS compliance

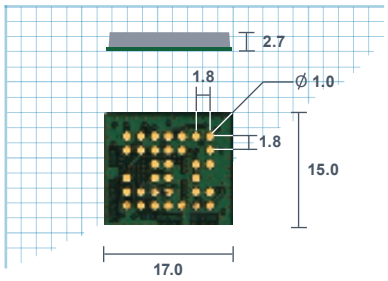
Navman Wireless' Jupiter 32 xLP has been designed to address markets where performance, power, size, and flexibility matter. An extra low power successor to the ultimate Jupiter 32, the Jupiter 32 xLP has designed with the smallest, autonomous, fully featured GPS receiver.

Incorporating the highest specification components available, the Jupiter 32 xLP consumes less than 88mW and can track down to -159 dBm. Jupiter 32 xLP offers unparalleled accuracy and extremely fast fixes even under attenuated conditions such as in built-up urban areas, dense foliage, indoors or while subject to challenging temperature profiles.

Featuring active or passive antenna support, write to flash configuration, power saving modes, SiRFInstantFix support and full multi-mode aiding capability, the Jupiter 32 xLP is highly suited for all battery powered applications or high-end track and trace.

Module architecture





Jupiter 32 xLP module
actual size (mm)

SiRF Powered

Jupiter 32 xLP

Product specifications

Receiver architecture
- 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)
- velocity, up to 500 m/s
- acceleration, up 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

Antenna input
- integral LNA for use with passive antenna
- active antenna powered through receiver (50 mA max at 12 VDC max)

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

Environmental
- operating temperature: –40°C to +85°C
- humidity: up to 95% non-condensing
- altitude: –305 m to 18 000 m

Compliance
- Manufactured to TS 16949
- EMC: FCC – Part 15, class B
- EN: 55022, class B
- RoHS

Physical
- dimensions: 17.0 x 15.0 x 2.7 mm
- weight: 2 g max

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

Data interfaces
- two serial ports available
- CMOS-level (3.3 VDC)
- selectable baud rates
- selected NMEA-0183/SiRF binary messages: latitude, longitude, elevation, velocity, heading, time, satellite tracking status, command/control messages
- SiRF binary interface: raw data

Electrical
- input power range: 3.0 to 3.6 VDC
- battery backup current: 5 to 6 µA (typ) for 1.9 to 3.3 VDC (SRAM and RTC)

Mode	Power consumption	
	@ 3 V	@ 3.3 V
average sustained power (after 1st solution)	<82 mW	<95 mW

Connectors
- data/power/RF through surface mount pads

Related documents
- LA000267 Jupiter 32 xLP data sheet
- LA000605 Jupiter 32 integrator's manual
- LA000645 Jupiter series development kit guide

Ordering information
- AA003255-G Jupiter 32 xLP(standard)
- AA003256-G Jupiter 32 xLP on adapter board
- AA003257-G Jupiter 32 xLP development kit

Contact your local distributor or Navman Wireless OEM:

www.navmanwireless.com/oem