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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Jupiter-F2

ULTRA SMALL RECEIVER MODULE

Jupiter-F2 Ultra Small Receiver Module

Building upon the SiRFstarIV™ architecture's high-performance and micro-power capabilities, the Jupiter-F2 incorporates innovations such as SiRFaware™, SiRFInstantFix™ and Active Jammer Removal. The Jupiter-F2 can navigate to -160dBm and track to -163dBm, providing higher coverage, accuracy and availability. This next generation Jupiter Module consumes only 13mA in 1-Hz TricklePower™ mode and can maintain hot-start conditions continuously in SiRFaware mode while drawing as little as 50-500µA.

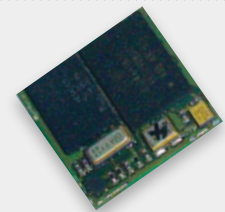
The Jupiter-F2 supports A-GPS and a full range of satellite-based augmentation systems, including WAAS, EGNOS, MSAS and GAGAN.

The Jupiter-F2 is a highly integrated GPS receiver that can be used as an SMT component. Operating from a 1.8V power supply, this module combines the SiRFstarIV™ GSD4e™ GPS engine, TCXO, LDO, SAW filter, RTC and Flash.

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FEATURES

- ❄ 48-Channel GPS Receiver
- ❄ Ultra low power, 13mA
- ❄ Tracking Sensitivity of -163dBm
- ❄ Integrated LNA
- ❄ Active 8 Jammer Remover
- ❄ UART, SPI, I2C Interfaces and 5 GPIOs
- ❄ Assisted GPS supported
- ❄ SBAS supported (WAAS, EGNOS, MSAS and GAGAN)



Jupiter-F2 | Ultra Small Receiver Module

SPECIFICATIONS

Receiver architecture

- 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

- 48 track verification channels

Active Jammer Remover

- Removes in-band jammers up to 80 dB-Hz
- Tracks up to 8 CW jammers

Accuracy

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

Acquisition performance

Mode	@ -130 dBm	
	Typical	90%
Hot start TTFF	500 ms	< 1 s
Warm start TTFF	31 s	35 s
Cold start TTFF	33 s	35 s

Sensitivity

- Acquisition: -148 dBm
- Navigation: -160 dBm
- Tracking: -163 dBm

Datums

- supports selection of datum, default: WGS-84

Environmental

- operating temperature: -40 to +85C
- humidity: up to 95% non-condensing
- altitude: 18 288 m (max)

Quality standards

- Automotive Standard: TS16949 (optional)
- EMC: FCC – Part 15, class B
- EN: 55022, class B
- RoHS

Physical

- dimensions: 11 x 11 x 2.3 mm
- weight: < 1 g

On-board filtering

- L1 -75 MHz, -30 dB
- L1 +50 MHz, -20 dB

Interfaces

- UART, SPI, and I2C
- 5 GPIOs
- CMOS-level (1.8 VDC)
- selectable baud rates
- selected protocols (NMEA-0183 v3.0, SiRF OSP)

Connectors

- data, power and RF through surface mount pads

Electrical

- input power range: 1.75 to 1.90 VDC

Mode	Power consumption
Average sustained power (after 1st solution)	61 mW
TricklePower*	23 mW
Hibernate	<14µA

* ATP ON time = 200ms, Navigation solution update rate = 1Hz, NMEA protocol = RMC only at 57600 baud.

Related documents

- J-F2 Data sheet
- J-F2 Integrator's manual
- J-F2 Development Kit user guide

Ordering information

- J-F2.0000.TR/TP Jupiter-F2 (TR=Tray, TP=Tape & Reel)
- J-F2.00DK Jupiter-F2 Development Kit

Note: 0's represent latest firmware, subject to change without prior notice.

MODULE ARCHITECTURE

