

Jupiter A-GPS

Client Server Service for Greatly Improved Time to First Fix

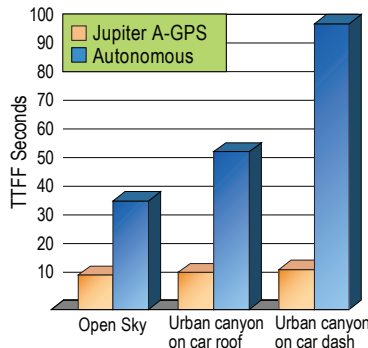
PRODUCT OVERVIEW

The Jupiter A-GPS end-to-end service greatly improves start-up times for any location-aware device with network connectivity. Fast start-ups—under 10 seconds—are made possible by employing a small Extended Ephemeris file acquired over any wireless or wireline internet connection, with accuracy up to seven days. Supported on SiRFstarIII™ chip solutions and on SiRFprima™, Jupiter A-GPS is the perfect solution for occasionally or always connected navigation-enabled devices.



KEY FEATURES

- Dramatically reduced Time to First Fix in most environments:



- Increased autonomous acquisition sensitivity
- Robust starts and continuous navigation in urban canyons
- Continuous connectivity not required
- No wireless charges or constant downloading
- Download supported through any connectivity type
- Extended Ephemeris (EE) file valid up to seven days
- Seamless operation between EE file and broadcast ephemeris
- Compatible with SiRFprima and all SiRFstarIII and SiRFstarII™ chip solutions

GENERAL DESCRIPTION

User experience is everything, and Jupiter A-GPS technology helps meet customers' expectations by eliminating the start-up wait commonly experienced today. Jupiter A-GPS's speedy start-ups are made possible via a simple network connection that eliminates the need to download a satellite ephemeris, allowing a SiRF receiver to be instantly navigating in almost any environment.

The key to the Jupiter A-GPS solution is a sophisticated set of proprietary algorithms that calculate an Extended Ephemeris (EE) file, yielding an accurate fix long after a traditional broadcast ephemeris has timed out—about four hours. Jupiter A-GPS can provide navigable positions for up to seven days.

Users can update their EE file as infrequently as once a week. Because the EE file is stored on the user device, there is no need for continuous connectivity. Downloading can be from a wireless or a wireline internet connection.



APPLICATIONS

► Occasionally or always connected mobile devices

TECHNICAL SPECIFICATIONS

Time To First Fix¹

With Jupiter A-GPS <10 s

Horizontal Acquisition Accuracy²

Day 1 - 2 <10 m
 Day 3 - 4 <20 m
 Day 5 - 7 <40 m

EE File Memory

EE file 77 KB
 Data segment³ 144 KB (RAM)
 Read-only segment³ 36 KB (ROM)
 Text segment³ 68 KB (ROM)
 Non-volatile memory 80 KB
 Supported protocols SiRF Binary⁴, NMEA

Server Information

Transfer protocol HTTP
 EE File update rate (7 day) Daily
 EE File update rate (3 day) 4 times a day

1. Needs >8 SVs in view & receiver must have been on for 24 hrs and off less than 14 hrs
2. 50% @ -130 dBm
3. These numbers are based on using Optimization Level 2 of the WinCE5.0 (ARMV4i) compiler. Numbers will vary depending on platform.
4. SiRF Binary Protocol not supported on SiRFprima or on other SiRF multifunction platform products

ORDERING INFORMATION

For more information about this and related products, contact your Navman Wireless representative, or call +1 (949) 461-7150, or visit www.navmanwirelessoem.com.

For the location of your nearest authorized distributor, visit www.navmanwireless.com.

Jupiter A-GPS ARCHITECTURE

The Jupiter A-GPS service allows Extended Ephemeris (EE) file distribution to the end user via HTTP protocol, eliminating the need for complex network integration.

Jupiter A-GPS Server

Navman Wireless maintains a Jupiter A-GPS server that creates the EE file using data from the GPS Global Reference Network. The EE file is made available for transfer to a customer distribution server.

Customer Distribution Server

A new EE file can be acquired by the customer distribution server as frequently as four times a day via HTTP transfer protocol. The EE file can then be made available to any end user and transferred via the chosen connectivity method daily or as little as once a week.

User Mobile Device

Navman Wireless provides a small program called the Client Location Manager (CLM) that unpacks the EE file and readies it for use by the Jupiter A-GPS solution. When requested by the GPS receiver, the CLM provides the necessary Extended Ephemeris data. If Extended Ephemeris data is not available, the Navman Wireless solution transparently reverts to using broadcast ephemeris data.

A-GPS CONFIGURATION

