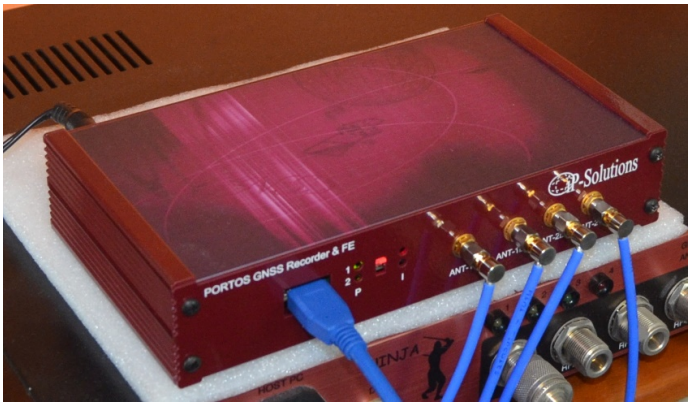
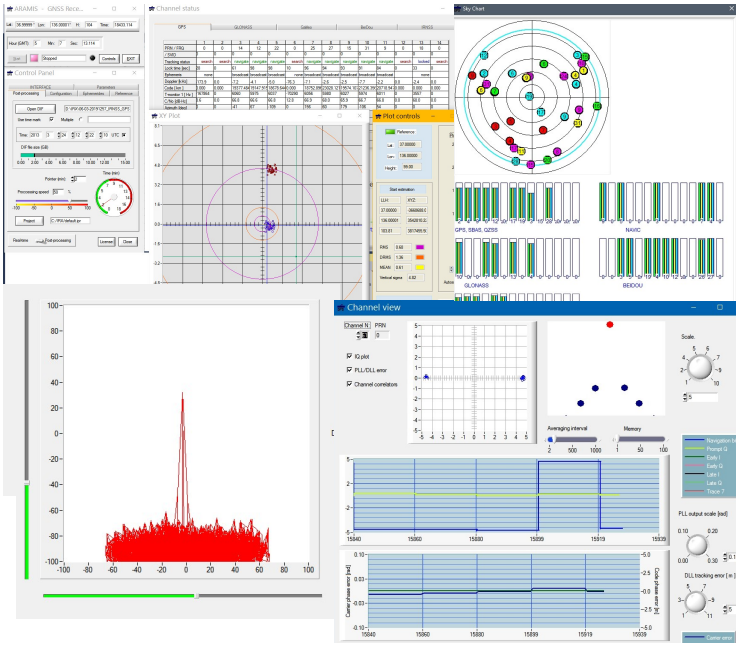
ARAMIS™ Software GNSS Receiver for R&D and academia





About

The ARAMIS™ receiver is a result of a development, which included an accumulation of over seven years of collaboration with the Japan Aerospace Exploration Agency (JAXA) from 2007 to 2014.
The receiver's software, hardware and firmware are developed by iP-Solutions for R&D and academia applications.

RF hardware (front end) options

The ARAMIS™ receiver can be supplied with the following iP-Solution's hardware.
*1) **Eagle**. TCXO clock, up to 2 RF and 2 antennas.*
*2) **ATOS**. OCXO clock, 2 RF, single antenna.*
*3) **PORTOS-L**. USB-2, OCXO clock, 4 RF and 4 antennas.*
*4) **PORTOS**, USB-3, OCXO clock, 4 RF and 4 antennas.*
*5) **SIREN**, USB-3, OCXO or Rubidium clock, 8 RF.*

Single RF can work with all signals on one central frequency. For example, PORTOS is capable of working with dual frequency GPS, Galileo, NavIC, QZSS, SBAS plus single frequency GLONASS or BeiDou at the same time.

Applications

ARAMIS receiver is an essential tool for GNSS related R&D and education due to its extreme flexibility, high level of visualization and extensive documentation support.

It has been originally developed for JAXA and it can be used in many applications including:

- monitoring of ionospheric scintillations,
- receiver algorithm development,
- development of tightly coupled INS/GNSS systems.

Access to inside of the receiver through API

(1) Navigation API provides an access to navigation processor source code and raw data.

(2) Baseband API provides an access to receiver baseband processor source code.

Features (some optional)

1. Supported signals: multi-frequency GPS, Galileo GLONASS, BeiDou, NavIC (including S-band), QZSS, SBAS.

2. High quality code and carrier phase observables (carrier sigma, CCD).

3.Data rate up to 50 Hz

3. Baseband algorithms are similar to conventional "hardware" receivers.

4. Coherent and adaptive tracking algorithms.

5. Positioning accuracy (standalone / differential with RTKLib) ~2.5m/10 cm

9. Output NMEA, RINEX, Google Earth .

References (books and articles)

1. I.Petrovski, T.Tsujii, Digital Satellite Navigation and Geophysics, Cambridge University Press, 2012.

2. I.Petrovski, GPS, GLONASS, Galileo and BeiDou for Mobile Devices . From Instant to Precise positioning. Cambridge University Press, 2014.

3. 1. T. Tsujii, T. Fujiwara and T. Kubota, Improvement of INS-Aided GPS Tracking Performance under Strong Ionospheric Scintillation, The 45th ISCIE International Symposium on Stochastic Systems Theory and Its Applications.
November 1-2, 2013, at University of the Ryukyus, Okinawa, Japan.

2. 辻井利昭、藤原健、久保田鉄也（宇宙航空研究開発機構），電離圏シンチレーション環境におけるＩＮＳ補強ＧＰＳ追尾ループの飛行評価，辻井利昭、藤原健、久保田鉄也（宇宙航空研究開発機構）第 51 回飛行機シンポジウム、香川県高松市、2013.11.20-22.

Sales inquiries: *info@ip-solutions.jp* ***For more information:*** **www.ip-solutions.jp**
iP-Solutions Satellite Applications, Inc. Level 9, Ariake Frontier Building B, 3-7-26, Ariake Koto-ku, Tokyo, 135-0063, Japan
Phone: +81-3-5530-8667