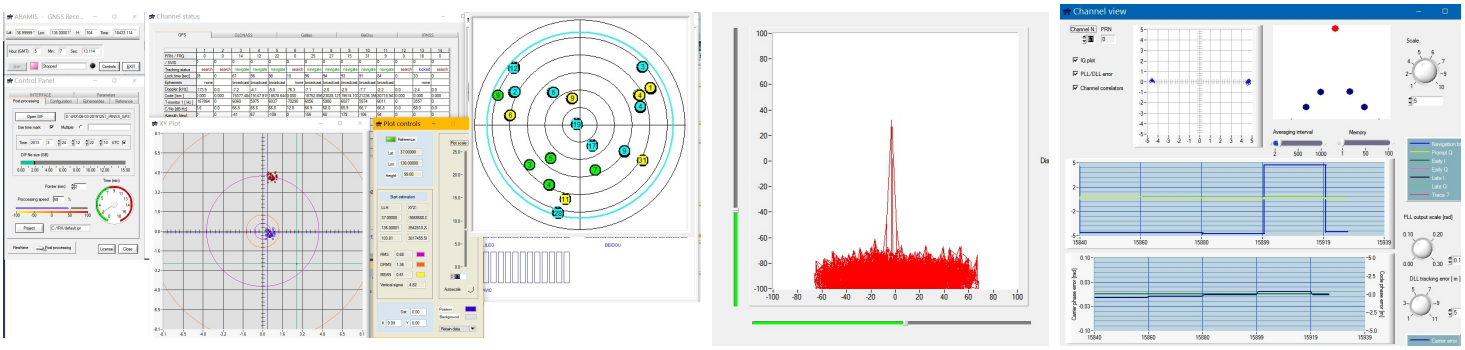
ARAMIS ™ Software GNSS Receiver with API



The ARAMIS™ is the accumulation of over seven years of collaboration with the Japan Aerospace Exploration Agency (JAXA).

Supported signals (some optional):

GPS L1, L2C, L5, Galileo E1,E5, GLONASS L1, L2, L3, BeiDou B1,B2, QZSS L1,L2C, NavIC L5,S, SBAS + user defined signals.

Default set with ATOS-L1: GPS L1CA + GLONASS G1
With ATOS: GPS L1CA + NavIC L5.

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 is used in many applications including:

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

Access to source code 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. High quality code and carrier phase observables (carrier sigma: 10-15 mm , CCD: 5-15 cm).

2. Position fix update rate up to 50 Hz

3. Cold start ~40s, BGPS™ start <1s.

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

5. Coherent and adaptive tracking algorithms.

6. High level of visualization for parameters of interest.

7. Positioning accuracy (standalone / differential with RTKLib) ~3m/10 cm

8. 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.

Front end

Eagle, TCXO clock, GPS single or dual antenna

ATOS, OCXO clock, dual system, dual frequency GNSS

PORTOS, OCXO clock Multiple systems and signals

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