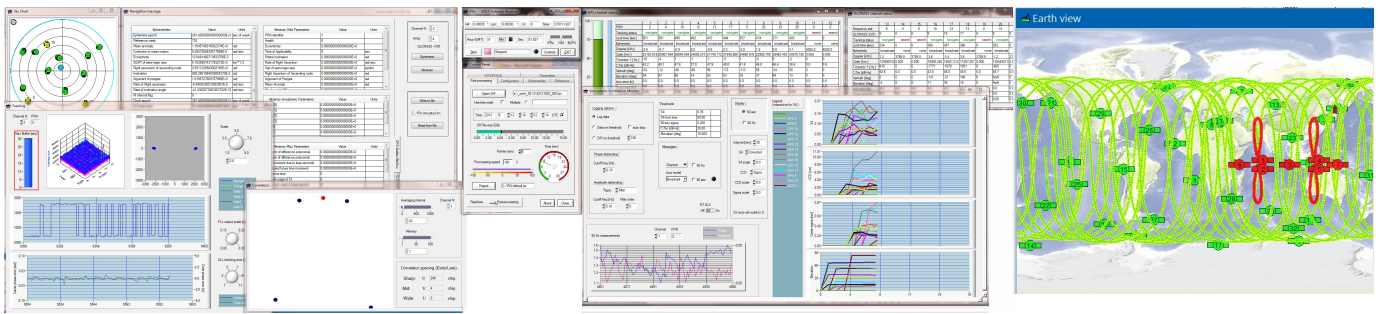




ARAMIS™ Software GNSS Receiver & Ionospheric Scintillation Monitor



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

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.

Features

1. High quality code and carrier phase observables (carrier sigma).
2. Data rate up to 50 Hz
3. Baseband algorithms are similar to conventional "hardware" receivers.
4. Coherent and adaptive tracking algorithms.
5. High level of visualization for parameters of interest.
6. Positioning accuracy (standalone / differential with RTKLib) ~3m/10 cm
8. Output NMEA, RINEX, Google Earth .

Access to inside of the receiver

- (1) Navigation API provides an access to navigation processor source code and raw data.
- (2) User can implement his own positioning and scintillation monitoring algorithms.
- (3) Baseband API provides an access to receiver baseband processor source code, in particular to acquisition and tracking loops.
- (4) Signal API allows to add user-defined signals.

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 ISIC 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.

Supported front ends



Academic Eagle: TCXO
GPS L1 only . One or two RF channels,
(one or two antenna inputs.)



PORTOS: OCXO , four RF channels
(one or more antenna inputs)



Customized front end with up to
8 RF cores and 8 RF inputs,
OCXO