

The Positioning Land and Space Scope – software, correction and processing services

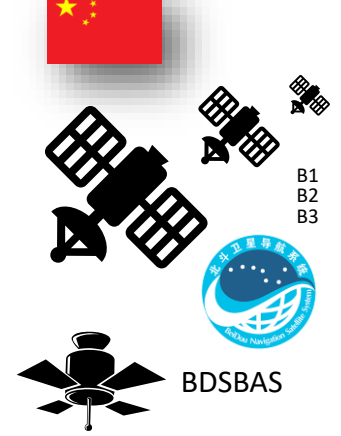
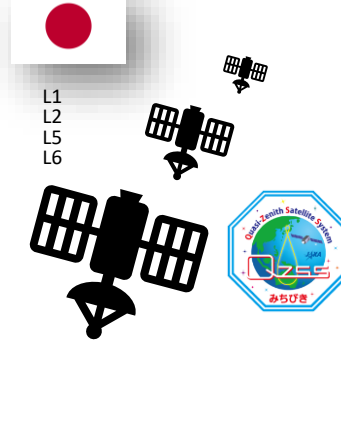
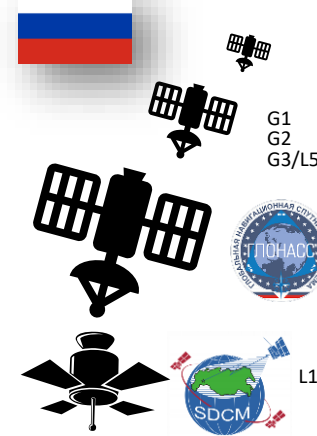
Space – GNSS Constellations and Augmentation Systems
The Crowded Sky

L1: 1574.42 MHz
L2: 1227.60 MHz
L5: 1176.45 MHz
L6: 1278.75 MHz

E1: 1575.42 MHz
E6: 1278.75 MHz
E5b: 1207.14 MHz
E5a: 1176.45

G1: 1600.995 MHz
G2: 1248.06 MHz
G3: 1202.25 MHz

B1: 1561.098 MHz
B3: 1268.52 MHz
B2b: 1207.14 MHz
B2a: 1176.45 MHz



Position Correction Services

Trimble RTX CenterPoint FieldPoint RangePoint ViewPoint PPP	HEXAGON HxGN SmartNet TerraStar veripos RTK & PPP	TOPCON Topnet Live MAGNET Relay Network RTK	SAPCORDA SAPA Service SPARTN L or IP	FUGRO Starfix Seastar PPP PPP	LEAR PICO PPP	UniStrong atlas RTK	swifT NAVIGATION SKYLARK™ RTK PPP	OCEANEERING C-Nav PPP	Position Partners AllDayRTK RTK	POSITIONING AUSTRALIA Ginan SouthPAN PPP PPP
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Others

RKBUN GNSS receiver and post-processing service.

GNSS SDR
GNSS software receiver.

Curtin University
TU Delft
LAMBDA and Ps-LAMBDA software

CentrePoint RTX
Trimble

magicGNSS
gmV

SCOUT
UC San Diego

GAPS
UNB
UNIVERSITY OF NEW BRUNSWICK

OPUS
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

APPS
Jet Propulsion Laboratory
California Institute of Technology

CSRS-PPP

AUSPOS
POSITIONING AUSTRALIA

On-line Services

Commercial offerings

Trimble Business Center Field-to-finish survey CAD software helps surveyors deliver high-accuracy GNSS data, create CAD deliverables, and leverage full data traceability throughout a project's lifecycle.	HEXAGON Leica Geosystems Leica Infinity Designed to manage, process, analyse and quality check all field survey measurement data.	swifT NAVIGATION Starling Starling is a receiver-agnostic precise positioning engine designed for automotive, industrial and consumer applications requiring higher accuracy from sensor-aided positioning.
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TOPCON MAGNET Software Suite Users can collect survey mapping data and perform construction and layout operations using colorized cut and fill indicators. Users can also create geo-referenced projects and publish mass data maps online.	effigis GEO SOLUTIONS ONPOZ Software OnPOZ Precision Positioning Software is a complete suite of applications that allows you to easily and accurately collect, record and post-process geospatial data.	septentrio PP-SDK PP-SDK - Post-Processing Software Development Kit combines GNSS and base station data to achieve reliable cm-level accuracy. The SDK includes all the necessary tools to incorporate post-processing functionality into your own applications and products.
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Solutions Inc. RTNet Software Providing robust state-of-the-art positioning algorithms for solutions in GNSS operations and research. RTNet supports both Precise Point Positioning (PPP) and Network processing.	gmV INNOVATING SOLUTIONS magicPPP Implements new generation Precise Point Positioning (PPP) algorithms developed by GMV as a result of more than 30 years experience in GNSS based precise orbit determination, time synchronization and positioning.	Rupert Brown v0.6 draft WIP 30 July 2021 FrontierSI Geoscience Australia POSITIONING AUSTRALIA
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University / Institution offerings

NAPEOS esa Napeos provides orbit determination and prediction, manoeuvre optimization and global parameter estimation capabilities and is able to process a wide variety of observation data, including: angles, range, range-rate, altimetry, satellite-to-satellite links and GNSS data.	Bernese u^b Astronomisches Institut The Bernese GNSS Software is a scientific, high-precision, multi-GNSS data processing software developed at the Astronomical Institute of the University of Bern (AIUB).	GAMIT / GLOBK Mit GAMIT, GLOBK and TRACK form a comprehensive suite of programs for analysing GNSS measurements primarily to study crustal deformation. The software has been developed by MIT, Scripps Institution of Oceanography and Harvard University with support from the National Science Foundation.	GipsyX Jet Propulsion Laboratory California Institute of Technology Single high-level user interface supports majority of precise positioning applications. Single-receiver ambiguity resolution using JPL's GPS orbit and clock products.
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GINS GRGS cnes The GINS software is developed and maintained by the CNES Spatial Geodesy team and is a precise orbitography application applied to spatial geodesy which allows the restitution of many geodesic or physical parameters accessible by spatial observations.	PRIDE PPP-AR II WUHAN UNIVERSITY PRIDE PPP-AR II originates in Dr. Maorong Ge's efforts on PPP-AR and later developed by Prof. Jianghui Geng's group. It is an open-source software package which is based on many GNSS professionals' collective work in GNSS Research Center, Wuhan University.	GINAN POSITIONING AUSTRALIA GNSS position correction service and software toolkit	RTKLIB Tomoji Takasu 東京海洋大学 RTKLIB is an open source program package for standard and precise positioning with GNSS (global navigation satellite system). RTKLIB consists of a portable program library and several APs (application programs) utilizing the library.
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GROOPS WISSEN TECHNIK LEIDENSCHAFT TU Graz The Gravity Recovery Object Oriented Programming System (GROOPS) is a software toolkit written in C++ that enables the user to perform core geodetic tasks. Key features of the software include the determination of satellite orbits from global navigation satellite system (GNSS) measurements, and the processing of GNSS constellations and ground station networks.	BKG Ntrip Client Bundesamt für Kartographie und Geodäsie BKG The BKG Ntrip Client (BNC) is an Open Source multi-stream client program designed for a variety of real-time GNSS applications. It can compute a real-time Precise Point Positioning (PPP) solution from RTCM streams or RINEX files.	GPSTk APPLIED RESEARCH LABORATORIES The University of Texas at Austin Provides an open source library and suite of applications to the satellite navigation community—to free researchers to focus on research, not lower level coding.	G-NUT Library Geodetic Observatory Pecny First applications derived from the G-Nut library are based on the Precise Point Positioning technique. The post-processing as well as real-time processing has been implemented supporting static or kinematic positioning solutions.
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