ADVANCED NAVIGATION

KINEMATICA
POST-PROCESSING

Kinematica is a GNSS/INS post processed kinematic (PPK) software.

It processes raw GNSS and INS data to achieve a higher level of accuracy than real time INS.

Kinematica is compatiable with all of Advanced Navigation's INS solutions.

PERFORMANCE

SPATIAL

- 0.04 ° Roll and Pitch
- 0.08 ° Heading

SPATIAL FOG DUAL

- 0.005 ° Roll and Pitch
- 0.007 ° Heading

KEY FEATURES

- Dual Antenna Heading Support
- Forward and Reverse Processing
- Precise Orbits and Clocks
- Odometer Aiding Support

APPLICATIONS

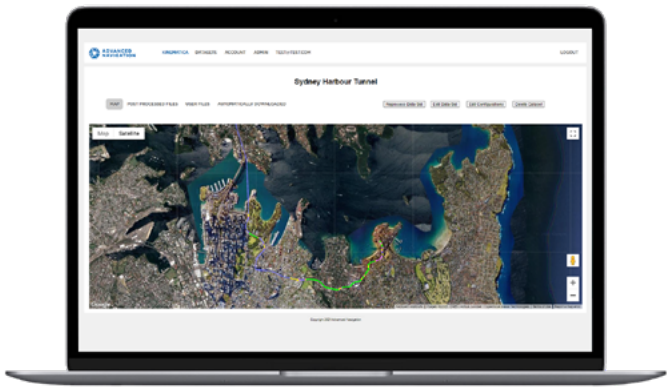
LAND SURVEY

MARINE SURVEY

LIDAR

AERIAL PHOTOGRAPHY

FEATURES



MAXIMUM INS ACCURACY

Kinematica processes data backward and forward in time with advanced algorithms.

This allows it to significantly reduce errors and extract the very best performance possible from an inertial navigation system.

KINEMATIC GNSS POSITIONING

Kinematica features kinematic GNSS post processing which provides a 200x increase in position accuracy over standard GNSS.

Kinematica automatically downloads the closest RINEX base station data and outputs position to an accuracy of 8 mm.

PRECISE POINT POSITIONING (PPP)

The Precise point positioning (PPP) algorithm models GNSS errors to provide decimetre-level positioning accuracy.

PPP can be used anywhere in the world, for example at sea or in remote areas, where real-time kinematic (RTK) accuracy in unavailable.

FORWARD & REVERSE PROCESSING

Kinematica's PPK algorithm parses data forwards and backwards to fill satellite outages and ignore errors that would normally affect a real time solution.

Data is processed in both diurections multiple times in order to obtain the highest accuracy results.

DUAL ANTENNA HEADING

For dual antenna systems, Kinematica supports tightly coupled dual antenna heading processing which significantly increases heading accuracy.

SPECIFICATIONS

SPATIAL ACCURACY

Horizontal Position Accuracy (no base station)	0.9 m
Vertical Position Accuracy (no base station)	1.2 m
Horizontal Position Accuracy (with base station)	0.02 m
Vertical Position Accuracy (with base station)	0.03 m
Horizontal Position Accuracy (60s after outage)	0.18 m
Vertical Position Accuracy (60s after outage)	0.22 m
Velocity Accuracy	0.005 m/s
Roll & Pitch Accuracy	0.04˚
Heading Accuracy	0.08˚

SPATIAL DUAL ACCURACY

Horizontal Position Accuracy (no base station)	0.9 m
Vertical Position Accuracy (no base station)	1.2 m
Horizontal Position Accuracy (with base station)	0.008 m
Vertical Position Accuracy (with base station)	0.015 m
Horizontal Position Accuracy (60s after outage)	0.16 m
Vertical Position Accuracy (60s after outage)	0.19 m
Velocity Accuracy	0.005 m/s
Roll & Pitch Accuracy	0.03˚
Heading Accuracy	0.06˚

SPATIAL FOG ACCURACY

Horizontal Position Accuracy (no base station)	0.7 m
Vertical Position Accuracy (no base station)	1.1 m
Horizontal Position Accuracy (with base station)	0.008 m
Vertical Position Accuracy (with base station)	0.015 m
Horizontal Position Accuracy (60s after outage)	0.13 m
Vertical Position Accuracy (60s after outage)	0.14 m
Velocity Accuracy	0.005 m/s
Roll & Pitch Accuracy	0.005˚
Heading Accuracy	0.01˚

SPATIAL FOG DUAL ACCURACY

Horizontal Position Accuracy (no base station)	0.7 m
Vertical Position Accuracy (no base station)	1.1 m
Horizontal Position Accuracy (with base station)	0.008 m
Vertical Position Accuracy (with base station)	0.015 m
Horizontal Position Accuracy (60s after outage)	0.10 m
Vertical Position Accuracy (60s after outage)	0.11 m
Velocity Accuracy	0.005 m/s
Roll & Pitch Accuracy	0.005˚
Heading Accuracy	0.007˚

TECHNICAL FEATURES

Supported Navigation Systems	GPS L1, L2, L5 GLONASS L1, L2 Galileo E1, E5 BeiDou B1, B2
GNSS/INS Log File Format	ANPP
Base Station Log File Format	RINEX v2.*RINEX v3.*
Configuration	Fully Automatic
Kinematic Processing	Yes
Dual Antenna Heading Support	Yes
Odometer Aiding Support	Yes
Precise Orbits and Clocks	Yes
Forward and Reverse Processing	Yes
Zero Velocity Updates	Yes

HEAD OFFICE

+61 2 9099 3800

sales@advancednavigation.com

Level 8 37 Pitt Street
Sydney NSW 2000
Australia

NORTH AMERICA

+1 863 777 0224

usasales@advancednavigation.com

Suite #100, 1420 Kettner Blvd
San Diego CA 92101
United States

EUROPE

+44 800 112 0480

uksales@advancednavigation.com

25 Old Broad Street
London EC2N 1HN
United Kingdom

SUBSEA RESEARCH CENTRE

+61 2 9099 3800

78 Guthrie Street
Osborne Park WA 6017
Australia

v2.1 September 2021.
© 2021 - Advanced Navigation. All Rights Reserved.
All trademarks are owned by Advanced Navigation Pty. Ltd.

ADVANCED NAVIGATION