

VEXCEL
IMAGING

ULTRANAV

Always on track





ULTRANAV

Leading the way

The UltraNav flight management and direct georeferencing solution optimizes your flight mission for utmost productivity at highest precision.

UltraNav features state-of-the-art GNSS-inertial technology based on the industry leading POSTrack from Applanix. Fully embedded in the UltraCam sensor head, UltraNav manages camera parameter settings, exposure triggering and the automatic mount stabilization, resulting in precise ground coverage and image overlap while reducing airtime. Pilot and operator displays connect directly to the camera head for mission guidance and in-flight quality control. Office software is included for intuitive mission planning with full DEM support and sophisticated

GNSS/INS processing.

The solution is available in different performance levels: 310, 410, 510 and 610 accuracy class of the included INS system. All INS systems are ITAR free for a maximum of operational flexibility.

No external computers are required, reducing the number of boxes, cables and connectors, increasing flexibility and making handling much easier.



EZRA PHILIPSE
ULTRANAV CUSTOMER

“UltraNav is the perfect all-in-one-solution. It is fully integrated in the camera making system installation simpler and cleaner and minimizes the potential for problems that could be caused by external cables. Less clutter, less weight, less worries.”

Specifications & details

Technical changes, printing errors, mistakes and amendments reserved.

PERFORMANCE SPECIFICATION¹ (RMS ERROR)

ULTRANAV 310	SPS	RTX ³	RTX Post-Processed ⁴	SmartBase Post-Processed ⁴
Position (m)	1.5 H 3.0 V	<0.1 H <0.2 V	<0.1 H <0.2 V	<0.05 H <0.1 V
Velocity (m/s)	0.050	0.050	0.010	0.010
Roll & Pitch (deg)	0.030	0.020	0.015	0.015
True Heading ² (deg)	0.100	0.080	0.035	0.035

ULTRANAV 510	SPS	RTX ³	RTX Post-Processed ⁴	SmartBase Post-Processed ⁴
Position (m)	1.5 H 3.0 V	<0.1 H <0.2 V	<0.1 H <0.2 V	<0.05 H <0.1 V
Velocity (m/s)	0.050	0.050	0.005	0.005
Roll & Pitch (deg)	0.008	0.008	0.005	0.005
True Heading ² (deg)	0.070	0.040	0.008	0.008

ULTRANAV 410	SPS	RTX ³	RTX Post-Processed ⁴	SmartBase Post-Processed ⁴
Position (m)	1.5 H 3.0 V	<0.1 H <0.2 V	<0.1 H <0.2 V	<0.05 H <0.1 V
Velocity (m/s)	0.050	0.050	0.005	0.005
Roll & Pitch (deg)	0.020	0.015	0.008	0.008
True Heading ² (deg)	0.080	0.040	0.020	0.020

ULTRANAV 610	SPS	RTX ³	RTX Post-Processed ⁴	SmartBase Post-Processed ⁴
Position (m)	1.5 H 3.0 V	<0.1 H <0.2 V	<0.1 H <0.2 V	<0.05 H <0.1 V
Velocity (m/s)	0.030	0.030	0.0050	0.0050
Roll & Pitch (deg)	0.005	0.005	0.0025 ⁵	0.0025 ⁵
True Heading ² (deg)	0.030	0.020	0.0050	0.0050

¹ Typical performance. Actual results are dependent upon satellite configuration, atmospheric conditions and other environmental effects.

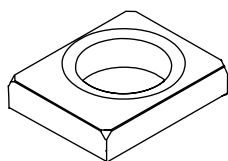
² Typical mission profile, max. RMS error.

³ Trimble RTX service, typical airborne results, subject to regional coverage and mission profile. Subscription sold separately.

⁴ POSpac MMS.

⁵ May require local gravity model to achieve full accuracy.

MOUNT INTERFACES

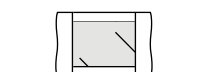


	Drift correction	Levelling control	Stabilization control	Gimbal encoder
GSM 4000	●	●	●	●
SSM 350L	●	●	●	●
SteadyTrack LG	●	●	●	●
Third party mounts ⁶				

⁶ Please contact our sales team for detailed information.

PHYSICAL CHARACTERISTICS

INERTIAL MEASUREMENT UNITS (IMU)



PILOT TOUCH SCREEN

Size:
40 x 159 x 258 mm

Weight:
1.2 kg

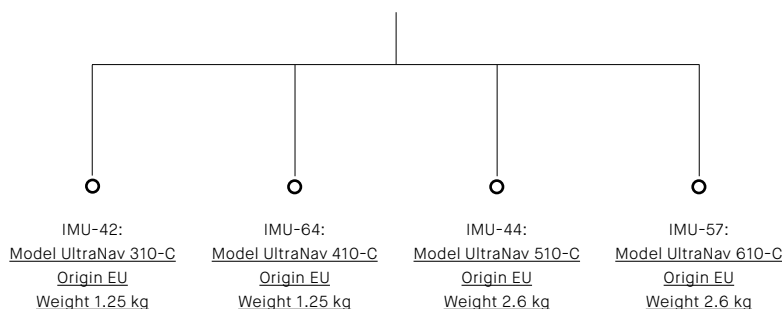
Power:
Supplied by camera



ELECTRONICS

Size:
Internal to camera

Power:
Supplied by camera



MISSION PLANNING AND REPORTING SOFTWARE

snap:VIEW
On screen
digitizing

Import raster data from various sources and formats, including Microsoft Bing Maps and Google Earth
Simple, intuitive and efficient digitizing of project areas

snap:XYZ
Entering coordinates
of areas or photo
lines

Accepts all geographic or grid coordinates formats without conversion or calculation
Includes a graphic viewer to visually check the correctness of the text input
Import drawings prepared by other programs in DXF format
Generate geophysics survey flight plans based on swath width and altitude

snap:PLAN
Flight planning
c/w DEM support

Planning module used to add photo lines to digitized drawings or defined geographic areas
Worldwide DEM support via ASTER DEM product
Automatic stereoscopic coverage of blocks
Prepare flight plans with with hundreds of runs and thousands of photos in one single mouse click
Interactive drawing of single strips, easily move strips and arrange until the best flight plan is achieved
Automatically prepare pinpoint flight plans where each photo position has to conform to a given grid (geographical or map)
Full support for line-scanner and LIDAR flight plans based on swath width and altitude
Export flight plans via KML and Bing

snap:BASE
Project management
database

Track and update the status and progress of projects
Check the data and generated during the flight and log accepted or rejected photos
Maintain an accurate and up-to-date photo index of the project
Generate film reports, progress reports, etc.
Export areas flown via KML and Bing

snap:PLOT
Printing and plotting

Printing and plotting module used to quickly and easily prepare scaled photo indices
Plot a professional A0 photo-index in less than 2 minutes

POST-PROCESSING SOFTWARE

Applanix POSPac
Mobile Mapping
Suite (MMS)

Direct georeferencing of mobile mapping sensors using GNSS and inertial technology

GNSS-Aided
Inertial Tools

Differential GNSS-Inertial software featuring Applanix IN-Fusion™ technology and Applanix SmartBase™ post-processed Virtual Base Station module
Simple intuitive and efficient digitizing of project areas

Photogrammetry
Tools

POSEO and CalQC modules for generation of Exterior Orientation, IMU-Camera boresight calibration, mission-specific quality control

