

# Quanta

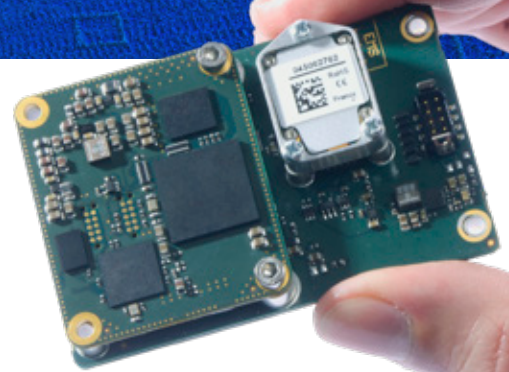


## Direct Georeferencing Solution INS + GNSS





Because we want integrators to reach the optimal productivity, we have designed the **QUANTA SERIES**, small, low-power, and highly accurate inertial navigation systems which provides orientation and navigation data, in real-time and post-processing.

# QUANTA



**Quanta** is a powerful and flexible INS+GNSS designed to be tightly integrated in mobile mapping solutions whether they are aerial or land. Quanta combines excellent orientation and navigation data in real-time with a powerful and easy-to-use post-processing software.

## The Right Combination for a Smooth Direct Georeferencing

	SMALL FORM FACTOR, LIGHTWEIGHT		GPS-GLONASS-GALILEO-BEIDOU
	PRECISE AND ROBUST ROLL/PITCH		ROBUST REAL-TIME RTK
	SINGLE OR DUAL ANTENNA HEADING		THE EASIEST PPK SOFTWARE

**FLEXIBLE:** use Quanta in both land and air applications

Use the same INS/GNSS either your mobile mapping solution is land or air based.

## Best-in-Class Inertial Navigation Systems



		Quanta	Quanta Extra
Roll/Pitch	Real-time RTK	0.03°	0.008°
	Post-processing	0.025°	0.005°
Heading		<b>Air:</b> 0.5° Single Ant.   0.2° Dual Antenna	<b>Air:</b> 0.1° Single Ant.   0.06° Dual Antenna
	Real-time RTK	<b>Land:</b> 0.15° Single Antenna	<b>Land:</b> 0.04° Single Antenna
	Post-processing	0.08°	0.025°
Position Horizontal		1cm + 1ppm	1cm + 1ppm



**Automatic Dual antenna Lever arm Calibration** : Alignment between antennas and the INS is easy to enter. It can be re-estimated while moving for more precision.

## Photogrammetry

Quanta reduces the need of GCPs and overlapping thanks to precise orientation and position data. You can extend your survey mission.

## Single or Dual Antenna

If a single antenna solution tends to be more practical, the dual antenna mode allows a more precise heading, an ideal set up for low dynamics flights such as pipes or electrical lines surveys.

## LiDAR

Quanta directly geotags your point cloud in real-time and with more accuracy in post-processing. It allows precise synchronization with survey device thanks to Precise Time Protocol (PTP) server

## Odometer Aiding

Quanta benefits from specific vehicle motion constraints to obtain the best performance and accepts both vehicle or external odometer data to compute a highly robust trajectory during GPS outages.

## Qinertia Post-processing Software

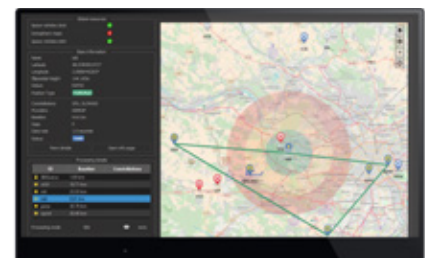
Qinertia uses inertial data and raw GNSS observables to provide astonishing attitude, heading and position performance, thanks to a forward, backward and merge processing.

## Centimetric position after your mission

Obtain the centimetric position without the constraint of an RTK radio link. Just drag and drop your base station, Qinertia PPP function will automatically determinate your base station coordinates.

## Extensive Quality Indicators

- » Interactive quality indicators assessment
- » Display of separation, standard deviation, bias, scale factor, lever arm
- » Statistics report generation (RMS, min/max)



**FREE:** one-year subscription to Qinertia UAV\*

\*UAV only. Processing trajectory within a 3km radius limit.

## Tightly Coupled INS/GNSS Fusion

## Modern & Intuitive User Interface

**+ 8,000 Base Stations** always up-to-date

# Specifications

All parameters apply from -40° to 85°C temperature range, unless otherwise stated.  
Full specifications can be found in the Quanta Hardware Manual available upon request.

## INTERFACE

<b>Aiding (input)</b>	GNSS, RTCM
<b>Protocols</b>	NMEA, ASCII, Binary
<b>Output rate</b>	0.1 to 200 Hz
<b>Logging Capacity</b>	8 GB or 48 h @ 200 Hz
<b>Ethernet</b>	Full Duplex (10/100 base-T) PTP Grand Master Clock NTRIP v1/v2 client
<b>Serial</b>	5x TTL UART ports
<b>CAN</b>	1 CAN 2.0 A/B bus up to 1 Mbit/s
<b>Pulses</b>	Inputs: PPS, Event marker up to 1 kHz Outputs: SyncOut, Trigger, PPS 5 inputs / 2 outputs
<b>Connectors</b>	44 pin contacts, 1.27 mm pitch, SMD

## PHYSICAL CHARACTERISTICS

Model	Quanta	Quanta Extra
<b>Weight</b>	76 g	360 g
<b>Dimensions (L x W x H)</b>	51.5 x 78.75 x 20 mm	GNSS+Processing: 51.5 x 78.75 x 20 mm IMU : 83.5 x 72.5 x 50 mm
<b>Consumption</b>	< 3.5 W	< 6.0 W
<b>Supply</b>	5.0 VDC ± 5%	5.0 VDC ± 5%

## ENVIRONMENTAL

<b>Temperature</b>	-40 to 85 °C / -40 to 185 °F
<b>MTBF (computed)</b>	50,000 hours
<b>Operating vibrations</b>	8 g RMS (20 Hz to 2 kHz per MIL-STD-810G)
<b>Humidity</b>	95% non condensing

RMS values for typical survey trajectories.  
Performance may be affected by atmospheric conditions, signal multipath, and satellite geometry. All specifications subject to change without notice.

## We Simplify your Integration

### Evaluation Kit

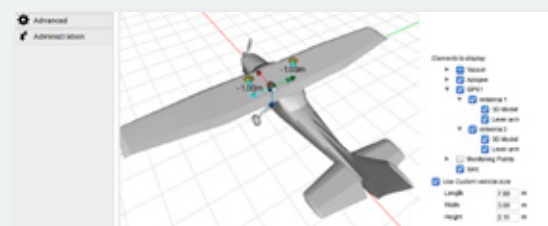
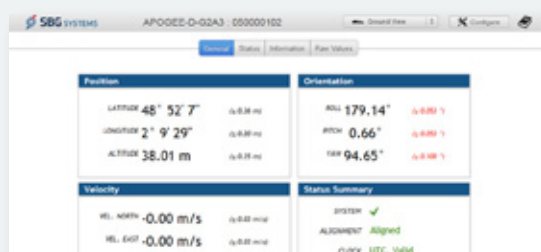
The evaluation kit consists of the evaluation board, antennas, cable, and accessories.



Evaluation board

### Intuitive Web Interface

Connect your sensor and configure it throughout the intuitive web interface.



### 3D View

The 3D View helps you to check your mechanical installation, especially your sensor position, your alignments, and levers arms.

Free Technical Support

Unlimited Firmware Updates

2-year Warranty