



## Skadi Gold™ GNSS: Our Most Advanced, Highest-Productivity, Multi-Frequency RTK GNSS Receiver for Your Smartphone, Tablet, or Laptop

*The Skadi Gold™ is the most advanced, productive RTK GNSS receiver in the Skadi Series™ from Eos Positioning Systems®. It supports all GNSS frequencies and constellations. With compatibility to any existing RTK networks and base stations, the Skadi Gold delivers reliable centimeter-level accuracy to any app of your choice. Thanks to powerful SafeRTK®, the Skadi Gold compensates for temporary RTK connectivity loss by maintaining your accuracy level below 10 centimeters. The Skadi Gold also supports free worldwide decimeter Galileo HAS corrections. If you work somewhere without an RTK network or internet, you may use the Skadi Gold to achieve down to 4 centimeter accuracy with a worldwide Atlas® satellite correction subscription. In addition to supporting Galileo HAS and Atlas, the Skadi Gold takes advantage of Eos GNSS receivers' unmatched performance with free SBAS corrections.*



*Designed for use with a broad range of mobile devices, the Skadi Gold incorporates rock-solid wireless Bluetooth® technology, allowing you to enjoy 1 centimeter accuracy in any app on iOS®, Android™, and Windows® devices.*

# Skadi Gold™



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## Skadi Gold™ Key Features:

- Supports all GNSS constellations and frequencies
- Supports free Galileo HAS decimeter corrections worldwide
- Supports Atlas® subscriptions for disconnected areas
- Skadi Tilt Compensation™ (activation)
- Skadi Smart Handle™ (upgrade)
- Hot-swap battery pack with 8+ hours of operation on one charge
- USB-C quick charging
- Compatible with iOS®, Android™, and Windows®
- Supports 1 centimeter RTK accuracy and SafeRTK® for temporary signal loss
- Supports all mobile GIS and surveying software

## Skadi Tilt Compensation™

Skadi Tilt Compensation™ eliminates the need to level your survey range pole while collecting data. This streamlines field work and reduces human error. Adding only 0.3 millimeter of error per degree of tilt to your RTK locations, Skadi Tilt Compensation boosts your productivity without sacrificing accuracy.



## Skadi Smart Handle™

The patented Skadi Smart Handle™ offers two exciting and powerful features. First, the Invisible Range Pole™ keeps your measurement plumb to the ground. Thanks to the exciting combination of LiDAR and MEMS technologies, your elevation is continuously computed at the ground below the receiver in your hand. Next, the Extensible Virtual Range Pole™ adds a laser pointer to help you aim at short-distance assets on the ground while retaining high accuracy. This is useful for assets in trenches and other hard-to-reach or unsafe locations. Simply point and shoot single targets, or continuously stream locations to create polyline features. Depending on surface reflectivity, Skadi Smart Handle can reach targets at up to 7 meters (23 feet) in bright sunlight.

## Shapeshift in the Field with the Skadi Gold

The Skadi Gold transforms on the fly into any configuration that best suits your needs. Transition from a range pole to handheld to field vest and more in a matter of seconds.

# Specifications

## GPS Sensor

|                           |   |
|---------------------------|---|
| Receiver Type:            | All-frequency all-constellation GNSS RTK receiver with integrated antenna   |
| Channels:                 | 800+ channels   |
| GNSS Signals Received:    | GPS: L1CA, L1P, L1C, L2P, L2C, L5<br>GLONASS: G1, G2, G3<br>Galileo: E1BC, E5a, E5b, E6BC, E5 (AltBOC)<br>BeiDou: B1i, B2i, B3i, B1C, B2A, B2B, B2 (ACEBOC)<br>QZSS: L1CA, L1C, L2C, L5, LEX<br>IRNSS: L5 |
| SBAS Support:             | 3 channel, parallel tracking (with SBAS ranging)  |
| L-Band (Atlas®) Support:  | 1 channel   |
| <b>Accuracy:</b>          |   |
| RTK:                      | 8 mm <sup>1</sup> + 1 ppm horizontal,<br>2 cm <sup>1</sup> + 1 ppm vertical (RMS)   |
| Skadi Tilt Compensation™: | RTK accuracy + 0.3 mm per degree of tilt  |
| Atlas®:                   | H10: 4 cm HRMS <sup>1</sup><br>H30: 15 cm HRMS <sup>1</sup><br>H50 (Basic): 30 cm HRMS <sup>1</sup>   |
| Galileo HAS:              | < 20 cm 2dRMS SBAS: < 30 cm HRMS <sup>1</sup> ,<br>< 60 cm 2dRMS  |
| SBAS:                     | <30 cm HRMS <sup>1</sup> , < 60 cm 2dRMS  |
| Autonomous:               | 1.2 meters HRMS <sup>1</sup>  |

### Miscellaneous Specifications:

|                       |   |
|-----------------------|---|
| Standard Update Rate: | Up to 10 Hz (20 Hz optional activation)   |
| Cold Start:           | < 60 seconds typical (no almanac or time) |
| Reacquisition:        | < 1 second                                |
| Maximum Speed:        | 1,850 kph (1,150 mph / 999 knots)         |
| Maximum Altitude:     | 18,288 m (60,000 ft)                      |

### Output Datum:

|                        |  |
|------------------------|--|
| Autonomous Datum:      | WGS-84 (latest revision)   |
| SBAS and Atlas® Datum: | ITRF (current year epoch)  |
| Galileo HAS Datum:     | GTRF (latest implementation)   |
| RTK Datum:             | Same as RTK base station/network   |
| Device Compatibility:  | iPhone® and iPad®<br>Android™ smartphones and tablets<br>Windows®, Windows Mobile® |

## Communication

|                               |   |
|-------------------------------|---|
| Port:                         | Bluetooth®, USB-C 2.0, serial   |
| Pre-Qualified Bluetooth:      | Dual-mode Bluetooth v4.2<br>BD/EDR – BLE (v5.1 tested)                            |
| Supported Bluetooth Profiles: | SPP, iAP2   |
| Bluetooth Transmission:       | Class 1 with 200 m typical range <sup>2</sup>                                     |
| Data I/O formats:             | NMEA 183, RTCM SC-104, binary   |
| Raw Measurement Data:         | Binary and RINEX  |
| Correction I/O Protocol:      | RTCM 2.x, 3.x, MSM, proprietary binary  |
| Timing Output:                | 1PPS, CMOS, Active High, Rising Edge Sync,<br>10 kΩ, 10 pF Load (via serial port) |
| Event Marker Input:           | CMOS, Active Low, Falling Edge Sync, 10 kΩ,<br>10 pF Load (via serial port)       |



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## Power

|                                    |   |
|------------------------------------|---|
| Battery Type:                      | Field replaceable, 24 Wh rechargeable Lithium-ion pack (rechargeable inside the receiver or separately) |
| Battery Autonomy:                  | 9+ hours <sup>3</sup> (without tilt compensation)   |
| Battery Autonomy:                  | 8+ hours <sup>3</sup> (with tilt compensation)  |
| Charging Time:                     | 2.5 hours (with supplied 20W USB-C power adapter)   |
| Hot-Swap Back-Up Battery Autonomy: | 10+ minutes   |

## Environmental

|                        |   |
|------------------------|---|
| Operating Temperature: | -40°C to +85°C (-40°F to +185°F) <sup>3</sup> |
| Storage Temperature:   | -40°C to +85°C (-40°F to +185°F)              |
| Humidity:              | 95% non-condensing                            |
| Compliance:            | FCC, CE, RoHS and lead-free                   |

## Mechanical

|                                     |  |
|-------------------------------------|--|
| Enclosure Material:                 | Xenoy® with TPU overmold                     |
| Enclosure Rating:                   | Waterproof, designed to meet IP-67           |
| Immersion:                          | 30 cm, 30 minutes                            |
| Receiver Dimensions:                | 14.2 cm x 9.5 cm x 6 cm (5.6" x 3.7" x 2.3") |
| Weight with Battery:                | 610 g (1.34 lbs)                             |
| Weight with Skadi Standard Handle™: | 935 g (2.06 lbs)                             |
| USB Connector:                      | USB type C receptacle                        |
| Serial Connector:                   | 5-pin circular jack                          |
| External Antenna Connector:         | HD-BNC female                                |

## Standard Included Accessories

|   |                             |
|---|-----------------------------|
| Skadi Gold™ GNSS receiver with integrated antenna | USB-C power adapter         |
| Pole mounting plate for Skadi Series™             | USB-C cable                 |
| Phone mounting bracket for Skadi Series handles   | Skadi Series hardshell case |
| Tablet mounting bracket for Skadi Series handles  | Skadi Standard Handle™      |
| Skadi Series Li-ion battery pack                  |                             |

## Optional Accessories & Activations

|                          |                                     |
|--------------------------|-------------------------------------|
| Skadi Tilt Compensation™ | External antenna and cable          |
| Skadi Smart Handle™      | Spare Skadi Series battery pack     |
| 20 Hz data output rate   | Atlas® satellite correction service |

### NOTES:

<sup>1</sup> Depends on multipath environment, number of satellites in view, satellite geometry, baseline length (for local services) and ionospheric activities. Stated accuracies for baseline lengths of up to 50 km

<sup>2</sup> Transmission in free space

<sup>3</sup> Lithium-ion battery performance degrades below -20° C (-4° F)

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