

Skadi 300[™]: A High-Productivity, Triple-Frequency RTK GNSS Receiver for Your Smartphone, Tablet, or Laptop

The Skadi 300^{TM} is an extremely high-productivity RTK GNSS receiver in the Skadi Series $^{\text{TM}}$ from Eos Positioning Systems $^{\circ}$. With support for triple GNSS frequencies (L1/L2/L5), multiple GNSS constellations, and SafeRTK $^{\circ}$, the Skadi 300 delivers reliable centimeter-level RTK accuracy in the field. The Skadi 300 works with most existing RTK networks, base stations, CORS networks, and even SBAS. For up to 4 centimeter worldwide accuracy, the Skadi 300 also supports Atlas $^{\circ}$ satellite corrections subscriptions.

Use the GIS, Surveying, or Data Collection Software of Your Choice

Designed for use with a broad range of mobile devices, the Skadi 300 incorporates rock-solid, wireless Bluetooth[®] technology. This allows you to enjoy 1 centimeter accuracy on any iOS[®], Android[™], or Windows[®] device.



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 your accuracy.

Skadi 300™



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Skadi 300[™] Key Features:

- Triple-frequency receiver supports all GNSS constellations
- Supports 1-centimeter RTK accuracy and SafeRTK® for temporary signal loss
- Supports Atlas® subscriptions for high accuracy in areas without RTK
- Skadi Tilt Compensation™ (activation)
- Skadi Smart Handle™ (upgrade)
- Includes hot-swap battery pack with 8+ hours of operation on one charge
- USB-C quick charging
- Compatible with iOS[®], Android[™], and Windows[®]
- Supports all mobile GIS and surveying software

Shapeshift in the Field with the Skadi 300

The Skadi 300 transforms on the fly into any configuration that best suits your needs. Transition from survey range pole to handheld to field vest to backpack in a matter of seconds.



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 MEMS technologies, your elevation is and 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 either single targets, or continuously stream locations for polyline features. Depending on surface reflectivity, Skadi Smart Handle can reach targets at up to 7 meters (23 feet) in bright sunlight.

Specifications

GPS Sensor —	
GF3 Selisoi	
Receiver Type:	Triple-frequency all-constellation GNSS RTK receiver with integrated antenna
Channels:	800+ channels
GNSS Signals Received:	GPS: L1CA, L1P, L1C, L2P, L2C, L5
	GLONASS: G1, G2, G3, P1, P2
	Galileo: E1BC, E5a, E5b
	BeiDou: B1i, B2i, B2A, B2B
	QZSS: L1CA, L1C, L2C, L5
	IRNSS: L5
SBAS Support:	3 channel, parallel tracking (with SBAS ranging)
L-Band (Atlas®) Support:	1 channel
Accuracy:	
RTK:	8 mm ¹ + 1 ppm horizontal, 2 cm ¹ + 1 ppm vertical (RMS)
Skadi Tilt Compensation™:	RTK accuracy + 0.3 mm per degree of tilt
Atlas [®] :	H10: 4 cm HRMS ¹
	H30: 15 cm HRMS ¹
	H50 (Basic): 15 cm HRMS ¹
Galileo HAS:	< 20 cm 2dRMS SBAS: < 30 cm HRMS¹, < 60 cm 2dRMS
SBAS:	< 30 cm HRMS ¹ , < 60 cm 2dRMS
Autonomous:	1.2 meters HRMS ¹
Missellansous Specification	

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: SBAS and Atlas® Datum: RTK Datum: Device Compatibility:

WGS-84 (latest revision) ITRF (current year epoch) Same as RTK base station/network iPhone® and iPad® Android[™] smartphones and tablets Windows®, Windows Mobile®

Communication

Port:	Bluetooth [®] , USB-C 2.0, serial
Pre-Qualified Bluetooth:	Dual-mode Bluetooth v4.2
	BD/EDR – BLE (v5.1 tested)
Supported Bluetooth Profiles:	SPP, iAP2
Bluetooth Transmission:	Class 1 with 200 m typical range ²
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,
	10 kΩ, 10 pF Load (via serial port)
Event Marker Input:	CMOS, Active Low, Falling Edge Sync, 10 kΩ,

Positioning Systems

Eos Positioning Systems Inc. Terrebonne (Quebec), Canada Tel: +1 (450) 824-3325

10 pF Load (via serial port)

www.eos-gnss.com | info@eos-gnss.com

Power -

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

-40°C to +85°C (-40°F to +185°F)3

-40°C to +85°C (-40°F to +185°F)

FCC, CE, RoHS and lead-free

95% non-condensing

Environmental

Operating Temperature: Storage Temperature: Humidity: Compliance:

Mechanical

Enclosure Material:	Xenoy [®] with TPU overmold
Enclosure Rating:	Waterproof, designed to meet IP-67
Immersion:	30 cm, 30 minutes
Reciever Dimensions:	14.2 cm x 9.5 cm x 6 cm (5.6" x 3.7" x 2.3")
Skadi Standard Handle™	
Dimensions:	26.6 cm x 7.6 cm x 16.2 cm (10.5" x 3.0" x 6.4")
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 300™ GNSS receiver with integrated antenna Pole mounting plate for Skadi Series™ Phone mounting bracket for Skadi Series handles Tablet mounting bracket for Skadi Series handles Skadi Series Li-ion battery pack

USB-C power adapter USB-C cable Skadi Series hardshell case Skadi Standard Handle™

adapter)

Optional Accessories & Activations

Skadi Tilt Compensation™ Skadi Smart Handle™ 20 Hz data output rate

External antenna and cable Spare Skadi Series battery pack Atlas® satellite correction service

NOTES :

¹ 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 ² Transmission in free space

³ Lithium-ion battery performance degrades below -20° C (-4° F)

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