



## Bad Elf Flex Democratizes GNSS and Economizes Field Data Collection.

Our customers shared their needs for lower cost GNSS solutions that include full RTK rover workflow. Bad Elf Flex delivers 30-60cm accuracy all day, every day.

Need higher accuracy? No problem! Bad Elf Flex tokens provide a USD \$25\* per day rate for features that typically cost thousands of dollars – and every Bad Elf Flex unit includes a free starter pack for you. This daily rate includes full access to both an unlocked RTK workflow and the Atlas L-Band correction service. Bad Elf Flex is the first GNSS receiver to have a daily choice with unlimited switching between L-Band and RTK.

The Bad Elf Flex delivers customers a comparative advantage in a total geospatial solution. A single GNSS receiver removes the need for deploying multiple devices in the field. Surveyors and their crews now have a scalable accuracy, survey-grade receiver. GIS managers focus on flexible field choices for work crews with varying skill levels. Businesses obtain operational and financial efficiencies. Bad Elf Flex effectively offers you several products in one package through flexible software and configuration. Some have even said it is Engineered Magic®!

Bad Elf Flex delivers high accuracy without any additional subscription or cost. Compatible with phones or tablets for use in GIS, mapping, agriculture, and survey data collection.

On-demand data logging includes:

- Raw data logging in RINEX format for post-processing
- Logging in CSV or NMEA 0183 formats
- Available standalone or through the Bad Elf Flex app



# Bad Elf

## Part Number

<b>Model</b>	BE-GPS-5500 (Standard) BE-GPS-6500 (Extreme)
--------------	---

## Positioning Engine<sup>1</sup>

<b>GPS</b>	L1CA / L1P / L1C / L2P / L2C / L5
<b>GLONASS</b>	G1/G2/P code (P1/P2)
<b>BeiDou</b>	B1/B2/B3
<b>Galileo</b>	E1BC / E5a / E5b
<b>QZSS</b>	L1CA / L1C / L2C / L5

## Positioning Performance<sup>2</sup>

<b>Horizontal accuracy - RTK</b>	1 cm
<b>Horizontal accuracy - SBAS (WAAS)</b>	30-60 cm
<b>Horizontal accuracy - Autonomous</b>	1.2 m
<b>Horizontal accuracy - L-Band via Atlas</b>	4 cm
<b>Cold start time</b>	< 60 s typical (no almanac or RTC)
<b>Warm start time</b>	< 30 s typical (almanac and RTC)
<b>Hot start time</b>	< 10 s (almanac, RTC, and position)
<b>Maximum speed</b>	1,850 kph (999 kts)
<b>Maximum altitude</b>	18,288 m (60,000 ft)
<b>Differential options</b>	SBAS, Autonomous, External RTCM v2.3, RTK v3, L-band (Atlas), and DGPS
<b>Correction I/O protocol</b>	Hemisphere GNSS <sup>*</sup> ROX, RTCM v2.3 (DGPS), RTCMv3 (RTK), CMR, CMR+, Atlas

## Interfaces

<b>USB</b>	USB 2.0 device via Mini-USB receptacle USB 2.0 host OTG via supplied adapter
<b>Bluetooth</b>	Bluetooth V4.0 (HS) with integrated Class 1.5 PA Supports 3 simultaneous connections
<b>Wi-Fi</b>	802.11b/g/n

## Compatibility

<b>Platforms</b>	iOS, Android, Windows
<b>Mobile App</b>	The Bad Elf Flex App requires iOS 9.0+ or Android 9+
<b>Connectivity</b>	Bluetooth SPP, USB Serial

<sup>1</sup> Constellations and frequencies are dependent on receiver configuration and subscriptions, Bad Elf Flex Standard supports multi-constellation, single frequency + SBAS. Tokens unlock listed frequencies, RTK, and L-Band. Bad Elf Flex Extreme supports all listed constellations, frequencies, and RTK.

<sup>2</sup> Accuracies listed are best-case, ideal circumstances, RMS.

## Operating Specifications

<b>Operating</b>	-4°F to +131°F (-20°C to +55°C)
<b>Battery Powered</b>	-14°F to -140°F (-10°C to +60°C)
<b>Externally Powered</b>	-22°F to +140°F (-30°C to +60°C)
<b>Charging Temp</b>	41°F to +113°F (+5°C to +45°C)
<b>Storage Temp</b>	-40°F to +167°F (-40°C to +75°C)

## Battery Specifications

<b>Full RTK</b>	11 hours
<b>L-band Atlas</b>	8 hours

## Mechanical Specifications

<b>User interface</b>	Transflective LCD Membrane Buttons 3 multicolor LEDs Audible tones
<b>Dimensions</b>	10.0" x 2.75" / 254mm x 70mm
<b>Weight</b>	29oz / 854g
<b>Helical Antenna Phase Center</b>	23cm above base of Flex unit Add 1.5cm with adapter installed

## Environmental Specifications

<b>Humidity</b>	100% condensing
<b>Waterproof</b>	IP65

## Product Specifications

<b>USB Port</b>	Mini-USB port for charging and data transfer
<b>Accelerometer</b>	3-axis
<b>Display</b>	400 x 240 pixel transflective LCD screen with backlight
<b>Firmware</b>	Field upgradeable via app or USB

## Package Contents

- BE-GPS-5500 Flex receiver
- 3ft (90cm) Mini-USB cable for charging
- 12-24V DC vehicle USB charger
- Wall adapter
- Accessory case
- Rugged waterproof case
- 5/8" x 11 to 1/4" x 20 adapter
- User's Manual & Quick Start Guide

## Contents

