

Bad Elf Flex Specifications

POSITIONING ENGINE ¹	
GPS	L1CA / L1P / L1C / L2P / L2C / L5
GLONASS	G1/G2/P code (P1/P2)
BeiDou	B1/B2/B3 (separate variant without L5)
Galileo	E1BC / E5a / E5b
QZSS	L1CA / L1C / L2C / L5
POSITIONING PERFORMANCE	
Horizontal accuracy - RTK	1 cm
Horizontal accuracy - SBAS (WAAS)	30-60 cm
Horizontal accuracy - Autonomous	1.2 m
Horizontal accuracy - L-Band via Atlas	4 cm
Timing (1PPS) accuracy	20 ns
Cold start time	< 60 s typical (no almanac or RTC)
Warm start time	< 30 s typical (almanac and RTC)
Hot start time	< 10 s (almanac, RTC, and position)
Maximum speed	1,850 kph (999 kts)
Maximum altitude	18,288 m (60,000 ft)
Differential options	SBAS, Autonomous, External RTCM v2.3, RTK v3, L-band (Atlas), and DGPS
Correction I/O protocol	Hemisphere GNSS' ROX, RTCM v2.3 (DGPS), RTCMv3 (RTK), CMR, CMR+, Atlas
INTERFACES	
USB	USB 2.0 device via Mini-USB receptacle
	USB 2.0 host OTG via supplied adapter
Bluetooth	Bluetooth V4.0 (HS) with integrated Class 1.5 PA
	Supports 3 simultaneous connections
Wi-Fi	802.11b/g/n
COMPATIBILITY	
Platforms	iOS, Android, Windows
Mobile App	The Bad Elf Flex App requires iOS 9.0+ or Android 9+
Connectivity	Bluetooth SPP, USB Serial
OPERATING SPECIFICATIONS	
Operating	-4°F to +131°F (-20°C to +55°C)
Battery Powered	-14°F to -140°F (-10°C to +60°C)
Externally Powered	-22°F to +140°F (-30°C to +60°C)
Charging Temp	41°F to +113°F (+5°C to +45°C)
Storage Temp	-40°F to +167°F (-40°C to +75°C)
BATTERY SPECIFICATIONS	
Full RTK	11 hours
L-band Atlas	8 hours
MECHANICAL SPECIFICATIONS	
User interface	Transflective LCD
	Membrane Buttons
	3 multicolor LEDs
	Audible tones
Dimensions	10.0" x 2.75" / 254mm x 70mm
Weight	29oz / 854g
Helical Antenna Phase Center	23cm above base of Flex unit without adapter installed

	Add 1.5cm with adapter installed
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ENVIRONMENTAL SPECIFICATIONS

Humidity	100% condensing
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Waterproof	IP65
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PRODUCT SPECIFICATIONS

USB Port	Mini-USB port for charging and ElfPort™ expansion
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Accelerometer	3-axis
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Display	400 x 240 pixel transfective LCD screen with backlight
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Firmware	Field upgradeable via app or USB
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1Constellations and frequencies are dependent on receiver configuration and subscriptions.