



# Enduro Plus

## Data Sheet



### Multi-Purpose Tracking Device

The water resistant Enduro Plus is a powerful GNSS locator designed for lone worker, vehicle, pet and asset tracking applications. The thumb sized button makes this device ideal for applications requiring rapid notification of emergency alert or regular setting of geo-fences based on current location. Its built-in GNSS receiver supports GPS and GLONASS and has superior sensitivity and fast time to first fix. Its quad band GPRS/GSM subsystem supports 850/900/1800/1900 MHz allowing the Enduro Plus' location to be monitored in real time or periodically tracked by a backend server and mobile devices. Its built-in 3-axis accelerometer allows motion detection and extends battery life through sophisticated power management algorithms. System integration is straightforward as complete documentation is provided for the full featured @Track protocol. The @Track protocol supports a wide variety of reports including emergency, geo-fence boundary crossings, low battery and scheduled GNSS position.

### Highlights

- Multiple GNSS Support With u-blox M8 Chipset
- Thumb Sized Button Allowing Easier Emergency Alert or Instant Geo-fence Setting
- Vibration Feedback Confirming Successful Button Operation
- Water Resistant
- Full Power Management
- 400 Hours Standby Time, Up to 200 Days Standby Time With External Battery Accessory

### Advantages

- Water resistant
- Quad band GSM/GPRS 850/900/1800/1900 MHz
- Embedded full featured @Track protocol
- Internal GSM/GNSS antennas
- Thumb sized button allowing easier emergency alert or instant geo-fence setting
- Low power consumption, long standby time with internal battery
- Internal 3-axis accelerometer for power saving and motion detection
- Full power management, can be connected to external DC power or battery
- CE/FCC certified

## Enduro Plus Multi-Purpose Tracking Device



### GSM Specification

Frequency	Quad band: 850/900/1800/1900 MHz Compliant to GSM phase 2/2+ - Class 4 (2W @ 850/900 MHz) - Class 1 (1W @ 1800/1900 MHz)
GPRS	GPRS multi-slot class 12 GPRS mobile station class B
RMS Phase Error	5 deg
Max Out RF Power	GSM850/GSM900: 33.0±2 dBm DCS/PCS: 30.0±2 dBm
Dynamic Input Range	-15 ~ -108 dBm
Receiver Sensitivity	Class II RBER 2% (-107 dBm)
Stability of Frequency	< 2.5 ppm
Max Frequency Error	±0.1 ppm

### General Specification

Dimensions	68.5mm * 38.5mm * 23.5mm
Weight	60g
Battery	Li-Polymer 1300 mAh, 3.7V
Standby Time	Without reporting : 400 Hours 5 minutes reporting : 140 Hours 10 minutes reporting : 180 Hours
Water Resistance	IPX5 compliant
Charging Voltage	5V DC
External Battery Voltage	3.5V to 4.5V DC
Operating Temperature	-20°C ~ +55°C

### GNSS Performance (GPS & GLONASS)

GNSS Receiver Type	72-channel u-blox All-In-One GNSS receiver
Sensitivity	Autonomous: -147 dBm Hot start: -155 dBm Tracking & navigation: -162 dBm Reacquisition: -160 dBm
Position Accuracy (CEP)	Autonomous: < 2.5m SBAS: < 2.0m
TTFF (Open Sky)	Cold start: 30s average Warm start: 28s average Hot start: 1s average

### Air Interface Protocol

Transmit Protocol	TCP, UDP, SMS
Scheduled Report	Report position and status according to preset time schedules
Geo-fence	Support up to 5 internal geo-fence regions
Power On/Off Report	Report when the device is powered on or off
Low Power Alarm	Alarm when battery is low
SOS/Emergency Alarm	SOS alarm when function key is pressed
Special Alarm	Special alarm based on digital input
Motion Detection	Motion alarm based on internal 3-axis accelerometer

### Interfaces

Digital Inputs	Two digital inputs One positive trigger for ignition detection One negative trigger input for normal use
Power Button	Power on and power off, can be disabled by the air interface protocol
Function Button with Vibration Feedback	Emergency alert or instant geo-fence
GSM/GNSS Antennas	Internal only
Indicator LED	GSM, GPS and battery status
Mini USB Interface	For external power and configuration



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