

# GEOEVENT 2501

## GPS Based Event Recorder



The ASL GeoEvent 2501 is a robust unit that serves as an Event Recording System when interfaced with the onboard sensors in Automobiles, Locomotives, Industrial Process Plant or a moving asset.

In its operation, the unit works truly as a 'Black Box', no operator intervention is needed as the event occurrences are recorded in real time via the analog and digital signal inputs from the sensors to the unit. Safe operation range of the various input parameters is pre-programmed, and whenever the range is exceeded the 'event' is captured as a recorded data and can activate an alarm.

The location and time of such occurrences are recorded, enabled through the use of advanced satellite based Global Positioning System (GPS) receiver integrated in the unit. As an additional feature, the unit provides a communication interface using GSM or CDMA or a proprietary Radio channel (as per customer preference) to enable such recorded data to be sent to a DeskTop PC of a Control Station in real time using any one of the communication media.

### FEATURES

#### Operational Features

- Automatic event logging
- 128 MB or more on Compact Flash memory
- Interface to On-Board sensors with
  - 8 Analog Inputs (using 10 bit ADC)
  - 12 Digital Inputs/Outputs
  - Emergency event logging facility
- Time & Location stamp for Event recorded
- USB 2.0 high speed port for retrieval of recorded data to PC/Laptop/PDA
- 2 RS-232 serial interface ports
- Status indicators
- Protection against shock & vibration
- Compact in size

#### Optional Features

- Graphic Display and Key board interface on the unit for two-way data exchange
- GSM/GPRS or CDMA data communication interface for online transfer of emergency events to control station
- Interface over proprietary Radio
- Alarm indication
- Two way Voice communication between unit and Control Station
- Recording stoppages (Number and duration of stoppages), and over-speeding of moving platform

#### Technical Implementation

The design is implemented on a state-of-the art powerful FPGA platform. The design provides several useful interfaces to RS 232, USB 2.0, UART, GPS receiver, GSM communication and analog / digital sensors. In addition to the Compact Flash, the unit sports additional SDRAM, Flash and SDRAM memory for OS, Application code etc.

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### TECHNICAL SPECIFICATIONS

<b>Location Accuracy</b>	Better than 10 m
<b>Time Accuracy</b>	Better then 1 millisecond
<b>Event Recording Memory</b>	128 MB on Non-volatile Compact Flash (upgradeable to higher capacity)
<b>Event Retrieval</b>	Through USB 2.0 high speed
<b>Retrieval Rate</b>	480 Mbps
<b>Event messages</b>	User friendly protocol
<b>Digital Input/ Outputs</b>	CMOS Compatible
<b>Analog Inputs</b>	0 - 5 Voltage inputs through external conditioning network
<b>Antenna</b>	Active GPS antenna with magnetic mount
<b>Built in Modem</b>	GSM (GPRS) / CDMA
<b>Data Transmission Rate</b>	9600 bps
<b>Environmental</b>	Operating temperature: 0 to +55 deg Celsius Storage temperature: 20 to +70 deg Celsius
<b>Humidity</b>	95% RH at + 40 deg Celsius
<b>Electrical</b>	Power: 9 to 18 V DC (from vehicle battery) Power consumption: less than 6W
<b>Mechanical Dimensions</b>	200 mm (W) X 125 mm (D) X 50 mm (H)
<b>Weight</b>	< 1 kg

ASL Advanced Systems Private Limited (ASL) has been engaged in the design and development of Global Positioning System (GPS) receivers and GPS based applications. Established in 1992, ASL has successfully developed and supplied thousands of GPS receivers, and provided solutions using GPS technology in the areas of Automatic Vehicle Tracking, Mining, Timing, Mapping, Navigation (Land, Air, and Marine) etc. and also DGPS reference station for navigation and accurate positioning applications in Military and Civil sectors

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*Due to continuous product development ASL Advanced Systems reserves right to amend or alter specifications without notice.*