



**ARAI**<sup>®</sup>  
Progress through Research



**ISO 9001:2015**

**AIS 140  
IRNSS CERTIFIED**

**GSM**

**IRNSS**

**GNSS**

**IOs**

**SOS**

**IP67**

**Battery**

## BSTPL-17IS

BSTPL-17IS is an advanced GNSS & IRNSS based vehicle tracking device complying to newly introduced intelligent transport system standards, AIS-140. BSTPL-17IS Designed for complying to standards like IS 9000, ISO 16750, AIS 004, IEC 60529, IS 2465, ISO 6722, ISO 7637 and IP67. In addition to fulfilling the functionality requirements as required by AIS-140, the device meets interface requirements like multiple IO Ports, SOS (Emergency Button) and RS-232 interface.

Considering the mandate of government of India to have vehicle tracking device with one or more emergency buttons in all existing and new public service vehicles complying to AIS140 standard, BSTPL-17IS is designed keeping in view the Indian operating conditions. Software functionalities are built to integrate the device with the government command centre and send emergency alerts as mandated in the regulation.

BSTPL-17IS is equipped with advanced 32-Bit Cortex M0 Microcontroller and Highly sensitive GNSS & IRNSS Receiver and GSM Transceiver with Internal Antennas, which delivers accurate real time data in toughest environmental and operating conditions. Compact in size, BSTPL-17IS enables easy handling and easy installation.

Supporting four different types of protocols, device has provision for generating alerts for Emergency Button, Box Tamper, Ignition On/Off, Vehicle Battery Connect / Disconnect, Internal Battery Low, Harsh Breaking, Harsh Acceleration and Rash Turning.

## Features

- ✓ 32 Bit; Cortex Microcontroller
- ✓ 45000 Data Packets Storage
- ✓ Expandable to 100000 Data Packets Storage
- ✓ Wide DC Input Operating Voltage (7V to 36V)
- ✓ Main Power Reverse connection protection
- ✓ Main Power Over Voltage protection
- ✓ Built-In 3.7V / 1000 mA Li-Ion Battery
- ✓ Main Power Voltage Reading
- ✓ Multi Slot Class 12 GSM / GPRS Modem
- ✓ Supports SMS; TCP/IP; FTP, HTTP, HTTPS & MQTT Communication Protocols
- ✓ Supports eSIM With Profile Switching. Optional Micro SIM Provision
- ✓ Supports IRNSS, GPS, GLONASS & GALILEO. Also Supports GAGAN and AGPS
- ✓ 22 Tracking & 66 Acquisition Channels
- ✓ Receiver Sensitivity: -165 dBm
- ✓ Local and Over The Air (OTA) Software Update
- ✓ Local and Over The Air (OTA) Configuration
- ✓ Secured Over The Air (OTA) Configuration
- ✓ Configurable Data Sending Intervals
- ✓ Details of Network Operator Name, Serving Cell ID and Neighbouring Cell ID Info
- ✓ Five Digital Inputs
- ✓ Two Analog Inputs
- ✓ Two Digital Outputs
- ✓ SOS Interface
- ✓ RS-232 Interface
- ✓ CAN Support\*
- ✓ 3 Axis Accelero & Gyrometer
- ✓ GPS Odometer
- ✓ Provision for 3 server IPs and Ports
- ✓ LED Indication for Main Power; Internal Battery, GSM and GPS Status
- ✓ GPRS to SMS Fall Back
- ✓ Supports Sleep Mode function for longer battery Backup
- ✓ Box Open / Close detection
- ✓ Main Power Connect / Disconnect detection
- ✓ GSM Internal Antenna
- ✓ GNSS & IRNSS Internal Antenna
- ✓ Nylon Plastic Enclosure complying to IP67
- ✓ Dynamic Data Sending
- ✓ Alerts For Main Power Connect / Disconnect, Device Tamper, Over Speed, Harsh Breaking, Harsh Acceleration and Turning

## Technical Specifications

| SPECIFICATION           | DESCRIPTION   | SPECIFICATION          | DESCRIPTION   |
|-------------------------|---|------------------------|---|
| Microcontroller         | 32 bit Microcontroller, 256 kB Program Memory and 12 bit ADC  | Antennas               | Internal GSM & GNSS + IRNSS Antennas  |
| Internal Memory         | 32 Mb. Supports 45000 Data Packets Storage When No GSM/GPRS Network<br>100K Erase & Program Cycles. 20 Years Data Retention<br>Expandable to 64 Mb  | Mechanical             | Nylon Plastic Enclosure meeting IP67. Dimensions: 118 x 77 x 31 mm  |
| Power Supply            | Wide Range Of Operating Voltage. DC 7 - 36V   | Environmental          | Operating Temperature: -25°C to +85°C<br>Storage Temperature: -40°C to +85°C<br>Humidity: 95% Non-Condensing              |
| Internal Battery        | 3.6V, 1000 mA Li-Ion Battery. Expandable to 2000 mA   | LED Indications        | Main Power, Internal Battery, GSM Network & GNSS Status   |
| GSM Module              | Quad Band GSM 850 / 900 / 1800 / 1900 MHz. Sensitivity: -109 dBm. Jamming Detection<br>Class 12 GPRS. Coding Schemes: CS1 2 3 4. Maximum UL & DL Speed: 85.6 kbps   | Configuration Firmware | Local and Over The Air (OTA) & Configuration. Supports SMS & GPRS Modes<br>Local and Firmware Over The Air (FOTA) Support |
| GPS Module              | Supports IRNSS, GPS, GLONASS & GALILEO. Also Supports GAGAN and AGPS<br>33 Tracking & 99 Acquisition Channels.<br>Sensitivity: -163 dBm<br>Horizontal Position Accuracy: 2 Meters<br>CEP @ -130 dBm (Open to Sky) | Standards Complying    | IS 9000, ISO 16750, AIS 004, IEC 60529, IS 2465, ISO 6722, ISO 7637 and IP67  |
| SIM Support             | Supports eSIM. Supports Automatic Profile Switching<br>Optional Micro SIM   | Protections            | Main Power Over Voltage, Reverse Connection & Tamper Detection. ESD Protection  |
| Communication Protocols | TCP/IP, HTTP, FTP & MQTT  | Alerts                 | Main Power Connect/Disconnect, Device Tamper, Over Speed, Harsh Breaking, Harsh Acceleration and Harsh Turning            |
| Input & Output Ports    | 5 Digital Inputs, 2 Analog Inputs, 2 Digital Outputs, 1 RS232 Port & 1 SOS Interface  |                        |   |
| Sensors                 | 3 Axis Accelero & Gyrometer. Box Open / Close Sensor  |                        |   |
| CAN Interface           | Supported   |                        |   |
| External Interfaces     | Supports Fuel & Temperature Sensors, RF & NFC Reader and Immobilization Function  |                        |   |

Note: BS Technotronics Private Limited (BSTPL) reserves the right to alter this description or to adapt it to technical conditions at any time.



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