THANK YOU!

FOR CHOOSING

MOBISAT® A.T.L.A.S.


Advanced Telematic Automotive System

THIS MANUAL WILL SET OUT IN DETAIL ALL THE SERVICES OFFERED BY THE PRODUCT. FOR PROPER USE OF THE PRODUCT, WE ADVISE YOU TO READ THE WHOLE MANUAL THOROUGHLY.

www.mobisat.eu
INSTRUCTIONS FOR SAFE USE

Do not tamper with or de-assemble the device. If ATLAS is damaged or power supply cables are not isolated or damaged, turn off the power before touching the cables and the device.

All devices that transmit wireless data produce interference that could interfere with other devices in the vicinity.

ATLAS must be installed only by qualified personnel.

ATLAS has to be installed in a stable and safe manner inside the vehicle.

The ATLAS programming must be done with a mobile phone to connect your device to the internet.

ATLAS is susceptible to water and humidity. Install in a dry place where water and moisture cannot penetrate.

Any installation or programming activity is prohibited during lightning storms.

ATLAS has a USB interface. Use only the cable included with the device. Mobisat® is not responsible for any damage caused by connection with a non-original cable.

This chapter contains the information needed to handle the product safely. We recommend that you follow these instructions carefully to avoid dangerous situations:

▪ ATLAS uses a 10 – 16 V DC power supply
▪ The nominal voltage is 12 V DC
▪ To avoid mechanical damage, it is advisable to carry ATLAS in a shockproof container/pack.
▪ Before using ATLAS arrange the device so as to be able to comfortably view the LED indicators, which show the operating status of the device
▪ Turn off the vehicle’s instruments before installing and/or uninstalling ATLAS

LEGAL NOTES

Copyright® 2014 MOBISAT SAGL, herein referred to as: MOBISAT®. All rights reserved. It is forbidden to reproduce, send to third parties, distribute or digitally save part or all of the content included in this document, without prior written consent from MOBISAT®. Other product and company names mentioned herein may be “Trademarks” or “Trade Names” registered by their owners. MOBISAT® reserves the right to improve, change, or add to the contents in this document, whether pertaining to the design, the product features and specifications without notice and without incurring other obligations.
PRODUCT DESCRIPTION

ATLAS is a protective and satellite tracking system with GSM connectivity and GNSS (Global Navigation Satellite System), capable of determining geographical coordinates and sending them through the GSM/GPRS network. ATLAS is equipped with integrated antennas (GNSS and GSM), a 3D accelerometer (For the "Black-Box" functionality) and a Lithium Nickel backup battery. ATLAS is suitable for all those applications that require the remote location of objects. ATLAS connects to the vehicle through the OBDII port. This allows the reading of various kinds of information from the vehicle’s on-board computer, such as, for example: engine rpm, throttle pressure (%), travelling speed, etc. ATLAS, together with the Mobisat Greenbox service, allows for remote vehicle diagnostics using sophisticated tools such as the Virtual Dashboard and real-time forwarding (on the Smartphone client via push notifications) of any faults of the vehicle.

CONTENTS OF THE ATLAS PACKAGE

ATLAS is delivered to customers in a cardboard box containing all the accessories necessary for its use. The package contains:

- Device: ATLAS
- Short guide

MAIN SPECIFICATIONS

- Plug & Track. ATLAS is not installed, but simply plugged into the vehicle’s OBDII port
- Satellite protection is always on (the alarm is activated automatically with the removal of the key or an iButton®)
- Location by Satellite (in real time on Mobile tel. and Mobisat service® Greenbox)
- Accuracy: 2 metres
- 3D accelerometer
- Crash detection
- Deep Sleep mode (energy-saving)
- Virtual Odometer (GNSS measures the distance every 1 second)
- Parameters configurable via software, SMS, TCP / IP
- Smart algorithms for online tracking and calculating routes
- Smart algorithms to contain the roaming connection costs
- 5 programmable geographical Fences
- Weekly planning of tracking of positions
- Configuration of scenarios (Green Driving, Over Speeding, Immobiliser, Authorised Drivers)
- Integrated motion sensor
- Memory card (1Mb) can hold 8,000 records
- Backup integrated Lithium Nickel battery
TECHNICAL SPECIFICATIONS

- GNSS Processor (latest generation): TG3300 (GPS, GLONASS, GALILEO) / 32 channels, -161dBm sensitivity
- Quad-band GSM 900/1800 MHz processor; 850/1900 MHz – GPRS class 10 (up to 85.6 kbps)
- Optimal operating temperature of the product: -25°/+ 55°
- Power supply 10 to 16V
- CAN
- OBD to UART interpreter
- Integrated accelerometer
- Response time: HOT: 1sec TTFF, 35sec WARM, COLD: 45sec
- Cortex processor®–M3
- GSM antennas and internal GNSS (integrated)
- Integrated backup battery
- Measurements: 67x49.6x25mm

<table>
<thead>
<tr>
<th>NAMES OF PARTS</th>
<th>PHYSICAL SPECIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigation LED</td>
<td>LED</td>
</tr>
<tr>
<td>Modem LED</td>
<td>LED</td>
</tr>
<tr>
<td>GNSS</td>
<td>Internal GNSS antenna</td>
</tr>
<tr>
<td>GSM</td>
<td>Internal GSM</td>
</tr>
<tr>
<td>OBD–II connector</td>
<td>Standard OBD–II connector</td>
</tr>
<tr>
<td>USB</td>
<td>Mini USB input</td>
</tr>
</tbody>
</table>

TECHNICAL DETAILS

- Power supply 10 ...16 V DC
- 2W Max
- Consumption:
  - GPRS: ≈≈≈ On average 105 mA rms
  - Nominal: ≈≈≈ Average 49 mA rms
  - GPS Sleep: ≈≈≈ Average 20 mA
  - Deep Sleep: ≈≈≈ On average, less than 4mA
- Operating temperature: -25°c to +55°c
- Storage temperature: -40 ° c to +70 ° c
- Relative humidity for storage : 5 ... 95% (No condensation)
**ELECTRICAL FEATURES**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Min.</th>
<th>Type</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage of supply:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage of supply (Recommended Operating Conditions)</td>
<td>10</td>
<td></td>
<td>16</td>
<td>V</td>
</tr>
<tr>
<td><strong>Digital input</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input resistance (DIN1, DIN2, DIN3)</td>
<td>15</td>
<td></td>
<td></td>
<td>kOhm</td>
</tr>
<tr>
<td>Input Voltage (the Recommended Operating Conditions)</td>
<td>0</td>
<td></td>
<td>Voltage of supply:</td>
<td>V</td>
</tr>
<tr>
<td>Input threshold voltage (Ignition)</td>
<td>5</td>
<td></td>
<td></td>
<td>V</td>
</tr>
</tbody>
</table>

**MAXIMUM RATINGS**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Min.</th>
<th>Type</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Voltage (Absolute Max. Value)</td>
<td>-16</td>
<td></td>
<td>16</td>
<td>V</td>
</tr>
<tr>
<td>Digital Input voltage (Maximum Absolute Value)</td>
<td>-32</td>
<td></td>
<td>32</td>
<td>V</td>
</tr>
</tbody>
</table>

**THE SIM CARD**

ATLAS needs a SIM card to send the geographical coordinates and other data.

NB: Costs generated by the phone card are borne by the user.

ATLAS sends its position in two ways:

- ✔ SMS to a mobile phone (cost of 1 SMS)
- ✔ GPRS to the Greenbox Mobisat service® (the positions are posted on the Internet)

To calculate the power consumption of the cards for connecting to the Greenbox Mobisat service necessary to establish how often you want to receive a position from the GPS tracker. Although sending 1 position has a weight of just a few bytes, the operator charges for 1Kb for each connection (a bit like a flat fee per answer).

So: 1 position = 1Kb

The consumption of data traffic carried by the product depends on the configuration of the product and by the average number of hours in which a vehicle is in motion (ATLAS can be configured to send more data when it is moving and less data when it is stationary).

The cost of GPRS traffic varies from operator to operator. Average data consumption can range from 1Mb to 300Mb per month.

Caution: Inquire with the operator of the telephone network about the fees charged for GPRS browsing with the SIM card used with the product.
CONNECTIONS – LED – ACCESSORIES

INSERTING THE SIM CARD:

1 – Open the ATLAS shell with a screwdriver.

2 – Lift the cover to detect the presence of the slot in which to insert the SIM card.

3 – Insert the SIM card by sliding it into the slot as indicated.

4 – Connect the lithium battery to the connector.

5 – Close ATLAS properly supporting the two parts of the body as shown.

6 – ATLAS is ready to be used.
NAVIGATION LED

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always On</td>
<td>GNSS signal not received</td>
</tr>
<tr>
<td>Flashes every second</td>
<td>Normal mode, the GNSS is working</td>
</tr>
<tr>
<td>Off</td>
<td>GNSS is off because:</td>
</tr>
<tr>
<td></td>
<td>▪ Deep Sleep mode active</td>
</tr>
<tr>
<td></td>
<td>▪ GNSS antenna in Short Circuit</td>
</tr>
</tbody>
</table>

STATUS OF LED:

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flashes every second</td>
<td>Normal mode</td>
</tr>
<tr>
<td>Flashes every 2 seconds</td>
<td>Deep Sleep mode active</td>
</tr>
<tr>
<td>Flashes briefly and quickly</td>
<td>Modem Activity</td>
</tr>
<tr>
<td>Flashes quickly and constantly</td>
<td>Start Mode</td>
</tr>
<tr>
<td>Off</td>
<td>▪ The device is not working</td>
</tr>
<tr>
<td></td>
<td>▪ The device firmware is corrupt</td>
</tr>
</tbody>
</table>

CONNECTIONS TO THE OBDII PORT

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Behaviour</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ignition input</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>PWM BUS+/VPW</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>GND (–)</td>
<td>Ground pin</td>
</tr>
<tr>
<td>5</td>
<td>GND (–)</td>
<td>Ground pin</td>
</tr>
<tr>
<td>6</td>
<td>CAN H</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>K–Line</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>PWM BUS</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>14 CAN L</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>L-Line</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Power +(10...16) V DC</td>
<td>Power range +(10...16) V DC to ground</td>
</tr>
</tbody>
</table>
INSTALL ATLAS ON A VEHICLE

- Consult your vehicle owner’s manual to locate the OBDII port location
- Insert ATLAS into the OBDII port
- If the status LED and navigation light up, ATLAS is ready for use

**NB:** The SIM card must be inserted when ATLAS is disconnected from the vehicle

---

**Cable Connection**
You can install ATLAS with an extension cord. Some Mobisat® distributors include the cable as an accessory in the package (as in the picture below, for purely illustrative purposes).

The extension cable has the following benefits:
- It allows you to install the product in a hidden area of the vehicle for a more effective anti-theft feature.
- It lets leave the OBDII port available for vehicle diagnostics performed at authorized centres.
1. The long end of the cable connects to the product
2. The red OBDII plug, plugs into the OBDII port of the original vehicle
3. The OBDII plug marked in the image above as n. 3, replaces the OBDII port of the vehicle

PLEASE NOTE
ATLAS must be installed in a stable way (for example with a clamp) to any part of the vehicle not subject to movements and away from heat sources. For better satellite signal reception, we do not recommend the installation under metal surfaces.

WARNING
- The product label should face to heaven (the GNSS antenna is located under the label).
- The OBDII plug must be facing the front of the vehicle.
- The LED should face the rear of the vehicle.
GPRS CONNECTION

Contact the owner of the SIM phone operator placed on the device to obtain the following information:
- APN of the SIM card
- APN user name (if necessary)
- APN password (if necessary)
- HOME Operator (MCC+MNC)

The Mobile Country Code and Mobile Network Code are a 5-digit numeric code that identifies the telephone operator (Home Operator). For example: Telecom Italia Mobile has the MCC code: 222 and MNC: 01. For Telecom Italia Mobile the Home Operator will be: 22201. An updated list of these codes can be found on the website: [http://mcclist.com/](http://mcclist.com/)

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>SMS TEXT:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTIVATE GPRS CONNECTION</td>
<td><code>&lt;Space&gt;</code> <code>&lt;space&gt;</code> SetParam <code>&lt;Space&gt;</code> 1240 <code>&lt;Space&gt;</code> 1</td>
</tr>
<tr>
<td>APN CODE</td>
<td><code>&lt;Space&gt;</code> <code>&lt;space&gt;</code> SetParam <code>&lt;Space&gt;</code> 1242 <code>&lt;Space&gt;</code> apn code</td>
</tr>
<tr>
<td>APN user name (if necessary)</td>
<td><code>&lt;Space&gt;</code> <code>&lt;space&gt;</code> SetParam <code>&lt;Space&gt;</code> 1240 <code>&lt;Space&gt;</code> 1</td>
</tr>
<tr>
<td>APN password (if necessary)</td>
<td><code>&lt;Space&gt;</code> <code>&lt;space&gt;</code> SetParam <code>&lt;Space&gt;</code> 1242 <code>&lt;Space&gt;</code> apn code</td>
</tr>
<tr>
<td>HOME OPERATOR (MCC+MNC)</td>
<td><code>&lt;Space&gt;</code> <code>&lt;space&gt;</code> SetParam <code>&lt;Space&gt;</code> 1240 <code>&lt;Space&gt;</code> 1</td>
</tr>
<tr>
<td>INDICATE THE IP ADDRESS OF THE SERVER</td>
<td><code>&lt;Space&gt;</code> <code>&lt;space&gt;</code> SetParam <code>&lt;Space&gt;</code> 1245 <code>&lt;Space&gt;</code> 185.56.8.99</td>
</tr>
<tr>
<td>INDICATE THE PORT OF THE SERVER</td>
<td><code>&lt;Space&gt;</code> <code>&lt;space&gt;</code> SetParam <code>&lt;Space&gt;</code> 1240 <code>&lt;Space&gt;</code> 1</td>
</tr>
</tbody>
</table>

ATLAS will respond to each command confirming each transaction.

To verify that the GPRS connection is activated, send the following command: `<Space>` `<space>` getstatus

ATLAS will respond with the current status of the modem. In the message received:
- If GPRS: 0 – The GPRS connection has not started. Check the parameters for the connection as described above.
- If GPRS: 1 – The GPRS connection has been activated successfully.

SPECIAL COMMANDS

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>SMS TEXT:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBTAIN A GPS POSITION</td>
<td><code>&lt;Space&gt;</code> <code>&lt;space&gt;</code> getgps</td>
</tr>
<tr>
<td>POSITION WITH HYPERLINK</td>
<td><code>&lt;Space&gt;</code> <code>&lt;space&gt;</code> getgpslink</td>
</tr>
<tr>
<td>RESTART THE CPU</td>
<td><code>&lt;Space&gt;</code> <code>&lt;space&gt;</code> cpureset</td>
</tr>
<tr>
<td>FIRMWARE VERSION</td>
<td><code>&lt;Space&gt;</code> <code>&lt;space&gt;</code> getver</td>
</tr>
</tbody>
</table>
THEFT PROTECTION – AUTOGEOFENCE

ATLAS is equipped with a technology that allows you to be notified promptly in case of theft.
The alarm comes into operation:
- Every time the key is removed from the vehicle
- Whenever the iButton® is removed from the vehicle (if the vehicle is turned off and an iButton is installed)

In case of lifting, dragging, etc., ATLAS recognises theft at the moment when its position is detected at a distance greater than 500m from the point where the vehicle was parked. 500 metres is the length of the virtual fence radius as well as the factory setting. The width of the beam can be changed by the user as desired (see below).

We recommend not changing the amplitude of the Autogeofence radius in order to prevent the entry of “false alarms.” False alarms may be generated in cases where the vehicle on which ATLAS is installed is parked indoors or in shaded areas (where the satellite network is inaccessible).

Caution: in case of theft call 112 or 113, giving the police the vehicle’s location in real time (using the App: Greenbox). If you are able to provide real-time information about the location of a stolen vehicle, law enforcement officers are required to take steps for immediate recovery.

AUTOGEOFENCING CONTROLS
ATLAS sends each alarm to the Greenbox Mobisat® service and your Smartphone via push notification (If the APP Greenbox has been installed on the Smartphone and if push notifications have been enabled). It is advisable to configure the product to also send 1 SMS in case of theft (in the event that the Internet connection on your Smartphone is not active). The number of a mobile phone to which to send the theft alarm must be indicated in ATLAS. This is done by sending the command:

<Space> <space>SetParam<Space>190<Space>number to which the alarm should be sent.

The number to which the alarm should be sent MUST ALWAYS be indicated with the international prefix without ZEROS and without the “+” sign.
For example, if the phone number where the alarms should be sent is 123456789 and the country code is 0039 (Italy), the command issued would be the following: <Space> <space>SetParam<Space>190<Space>39123456789

AUTOGEOFENCE SETTINGS

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>SMS TEXT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTIVATE AUTOGEOFENCE</td>
<td>&lt;Space&gt; &lt;space&gt;SetParam&lt;Space&gt;1240&lt;Space&gt;1</td>
</tr>
<tr>
<td>IF AN iButton WAS INSTALLED®</td>
<td>&lt;Space&gt; &lt;space&gt;SetParam&lt;Space&gt;1100&lt;Space&gt;1</td>
</tr>
<tr>
<td>IF NO iButton IS INSTALLED®</td>
<td>&lt;Space&gt; &lt;space&gt;SetParam&lt;Space&gt;1100&lt;Space&gt;0</td>
</tr>
<tr>
<td>SEND AN ALARM WITH HIGH PRIORITY</td>
<td>&lt;Space&gt; &lt;space&gt;SetParam&lt;Space&gt;1103&lt;Space&gt;1</td>
</tr>
<tr>
<td>RAY OF VIRTUAL FENCE</td>
<td>&lt;Space&gt; &lt;space&gt;SetParam&lt;Space&gt;1105&lt;Space&gt;500</td>
</tr>
<tr>
<td>SEND AN ALARM IF THE VEHICLE IS OUTSIDE THE FENCING</td>
<td>&lt;Space&gt; &lt;space&gt;SetParam&lt;Space&gt;1104&lt;Space&gt;2</td>
</tr>
<tr>
<td>CUSTOMISE THE AUTOGEOFENCE MESSAGE. NB: Commas are part of the message and should be written.</td>
<td>&lt;Space&gt; &lt;space&gt;SetParam&lt;Space&gt;148&lt;Space&gt;1.0, AUTOGEOFENCE!</td>
</tr>
</tbody>
</table>
THE GREENBOX SERVICE

It is a service available for both PC (web) for Smartphone (App: Mobisat® Greenbox for Android, IoS and WIN Phone). Greenbox allows you to view in real time every movement of your vehicles (or people), from any PC connected to the Internet. In addition, from the service settings section you can send configuration commands to ATLAS product, such as for example:

- Geographical fences
- Speed alert
- Etc.

More information at: http://www.mobisat.eu/greenbox/

The application is simple and intuitive and does not require any software installation; in a few minutes it is operative to assist in real time with any action by any vehicle in its fleet (from one to a virtually infinite number of vehicles).

TO ACCESS THE SERVICE

To connect ATLAS to the Greenbox service you must register the device using the two codes that can be found on the product packaging:

- the IMEI No.
- the activation code (Serial no.)

SOLUTIONS IN CASE OF MALFUNCTION

ATLAS will not turn on

- Check that the power cables are properly connected

The SIM card of ATLAS is unreachable

- Make sure the device is on and working
- Check that ATLAS is in a location where there is GSM coverage

ATLAS does not send messages or does not respond properly to commands

- Reload the credit for the SIM card inserted in the device
- Check if you are calling ATLAS from an authorised number

ATLAS does not connect to the Mobisat® Greenbox service

- Check the parameters for the GPRS connection as indicated in the chapter: GPRS CONNECTION
WARRANTY AND SUPPORT

ATLAS has a 2-year warranty. For technical support on the product visit: http://www.mobisat.eu/support. Register (if you do not already have access credentials) to open a support ticket, indicating:

- the cause of the problem
- the product’s IMEI No.
- the No. of the SIM card inserted in the ATLAS
- the access data for the Greenbox account
- the data necessary to contact you (cellphone and email address)

INSTRUCTIONS FOR USE AND DISPOSAL

- Do not expose the product to rain or moisture. Use it only indoors to prevent any electrical hazard or fire
- Do not expose the product to heat sources
- The product must be installed by qualified professionals
- The product should not be left within the reach of unsupervised children or persons with disabilities for whom the ability to comply with safety regulations is prevented
- Do not try to open the product. If the product has suffered damage or power cords were not isolated, do not touch the product immediately and consult a specialist
- Do not leave the appliance connected to the power source when not in use
- Do not use extension cords or other accessories other than those expressly recommended by the manufacturer, to avoid risk of fire or electric shock

The symbol on the accessories means that the batteries in this product should not be disposed of with other household waste at the end of the life cycle. To protect natural resources and to promote material reuse, please separate batteries from other types of waste using the free return system in your area of residence.

DECLARATION OF CONFORMITY

"MOBISAT SAGL. (herein referred to as MOBISAT®) hereby declares that ATLAS meets the essential requirements and other relevant provisions of Directive 1999/05 / EC."

ATLAS has gained E26 approval

MOBISAT

MOBISAT S.a.g.l.
VIA LIVIO 24
6830 – CHIASSO
SVIZZERA
http://www.mobisat.eu