

Quick Start Guide

ASA100 Amber Swift A100 IOT Telematics Device



PRODUCT INTRODUCTION

The Intelli Business Solutions' IoT Telematics Device was designed to be an ultra-low power wireless tracking device. The size of the enclosure was designed to house a powerful 9000 mAh battery for longest possible self-powered battery life. It operates on the Sigfox IoT platform in the 868 MHz frequency range. It also has support for proprietary RF protocols and allows for peer-to-peer communication without needing to go through a base station. The product also has a very sensitive multi-constellation global navigation satellite system (GNSS) receiver for accurate location of the device.

The product can intelligently detect motion using an onboard accelerometer and to determine a vehicle's ignition status using an algorithm on the sensor inputs. A vehicle powered version housing a backup rechargeable battery with a sleeker more compact enclosure, is currently in certification progress. This version will follow similar installation guidelines as outlined in this document.

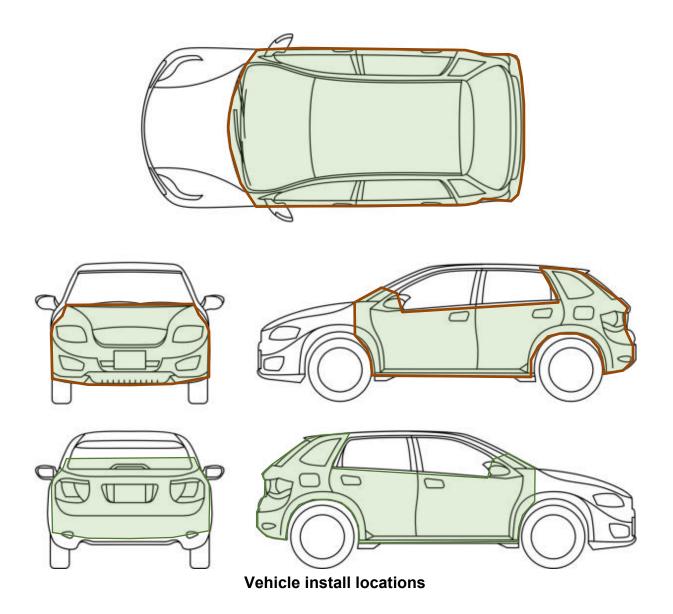


Images of ASA100 Telematics Device

INSTALLATION GUIDELINES

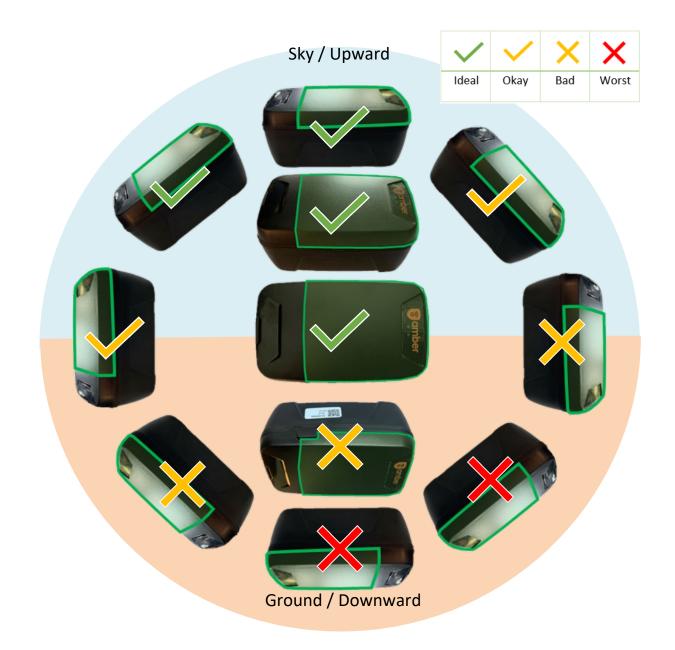
Considerations for choosing an installation location are as follows:

- The device is dust and water resistant, but the enclosure was not designed to withstand high-pressure water hoses or water submersion. The device should therefore be kept inside the sealed-off areas of the vehicle to avoid water damage. The device was therefore **not** designed for engine compartment installation.
- The antennas of the device are located at the top of the enclosure as shown Figure 1.
- The device should be **kept away from high temperature areas** such as the exhaust or engine compartment region, since this reduces optimal performance as well as the battery capacity.
- All considerations mentioned in this document should be considered to identify the best-balanced trade-off for the installation position.



The considerations for choosing the orientation of the device are as follows:

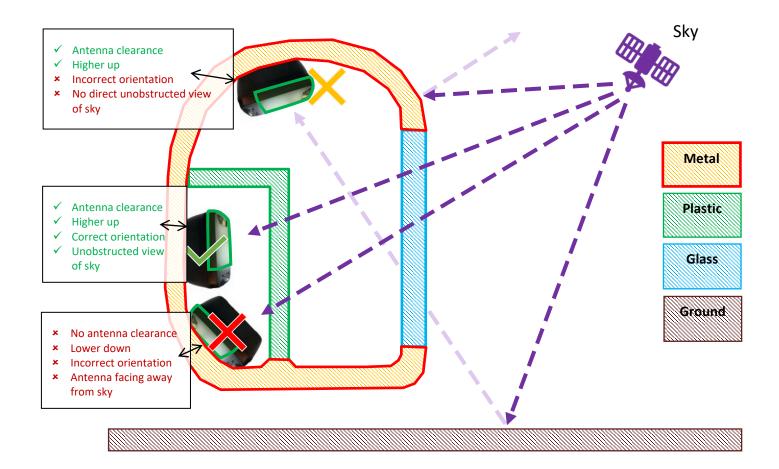
- The antenna region should be kept facing upwards as far as possible.
- Figure shows the ideal orientations for the device, as well as the worst case scenario orientations of the device.



Device orientation at installation location

A combination of the below factors indicates whether an installation is considered acceptable in terms of the installation surroundings:

- The correct orientation should be used as shown by Figure 3.
- Higher up inside the vehicle generally translates to better RF performance.
- The antenna region should have clearance (air gap) from other objects especially when these are made of some metallic material or alloy.
- Figure 4 shows the ideal installation surroundings and position for the device, as well as the worst scenario installation surroundings for the device.
- The antenna area of the device should be unobstructed as far as possible to achieve optimal performance. For optimal **GNSS (GPS)** reception, it is essential that the antenna side of the enclosure has a **view of the sky** that is **not obstructed by metal**.



Installation surroundings and examples

Other important factors to consider are:

- The device should be secured to the installation location in a rigid manner so as to prevent unwanted vibrations or mechanical wear over time.
- The device should be handled with care and kept safe from mechanical impacts caused by dropping or other forces caused by applied external loads, so as to ensure that the quality of the ceramics used inside the electronic components are kept at their optimal state.
- It is vitally important that the Amber mobile installation app is used to properly test and verify the functionality of the devices after installation, so as to test the quality of the installation. All the required fields need to be filled in accurately and in completion.

