GSA.32
Street View Auto Ready Performance Testing

TAOGLAS®

Service name:

GSA.32	Street View Auto Ready Performance Testing

Deliverables

Assessment Test Report

Duration:

5 Days

Items:

A. Test in 3D anechoic chamber – full performance test

B. If fail consult with sales for recommendations or custom solution

What is the problem or concern we are addressing?

Taoglas and the Google Street View team have collaborated to define a standardized certification process for GPS performance, Google Street View© Certification. This service provides the optional assessment (performance) testing optionally defined as part of this certification. A second service, GSA.31, provides the required conformance testing portion of Google Street View© Certification. GSA.31 provides a quick verification of minimum performance (in a pass/fail manner). GSA.32 provides an absolute performance level. This service provides insight into just how well (or poor) your device is performing, providing you with a baseline from which you can optimize or improve performance.

GPS module integration involves selection and implementation of the antenna, transmission lines between the antenna and receiver and in some cases a filter and/or Low Noise Amplifier in addition to the digital and power considerations of the module.

Physically small products such as cameras which contain both the GPS receiver system and numerous complex electronic systems are prone to problems with radio receiver performance caused by RF emissions from those included complex electronics systems. This interference is often in-band to the radio receiver and as such, cannot be filtered out.

Because it's very easy to have performance limitations due to noise, antenna selection, antenna implementation, LNA, filter, and transmission line implementation, this service helps to ensure the final product, as a whole, meets the performance requirements needed to ensure accurate data output.

This testing includes the performance of the GPS antenna and the receiver together. Antenna performance metrics such as efficiency, gain and axial ratio are not provided by this testing. Taoglas offers a separate service for measuring these antenna performance metrics.

The Process

Taoglas will use our GPS constellation simulator and anechoic chamber to measure radiated tracking and acquisition sensitivity at 15° intervals in one hemisphere. From the test data, your engineers will be able to clearly see if the GPS is performing adequately for basic GPS operation. If the GPS performance is reasonable and the GPS antenna performance (separate test) is reasonable, no further effort is required–you have verified the GPS performance of the product design. If the GPS performance is not in an acceptable range, a mitigation effort will be required to improve performance. The data taken during this testing is not sufficient to guide a mitigation effort—further testing will be required.

What does Taoglas need?

Taoglas will use our GPS constellation simulator and anechoic chamber to measure radiated tracking and acquisition sensitivity at 15° intervals in one hemisphere. From the acquisition sensitivity testing, a single number, Hemispherical Acquisition Sensitivity, is derived. From the tracking sensitivity testing, a single number, Hemispherical Tracking Sensitivity, is derived. From these test results, your engineers will be able to clearly see how well the GPS is performing. If the GPS performance is not in an acceptable range, a mitigation effort will be required to improve performance. The data taken during this testing is not wholly sufficient to guide a mitigation effort—further testing will be required. If the performance meets the established requirements, the device achieves the Google Street View Certification. No further testing is required.

The device shall include the following functionality:

- The device must enable the GPS receiver immediately;

- The device's host processor must not communicate with the GPS receiver, except as required to pass communications from the GPS receiver to the test PC.

- The device's host processor must not reset, disable, or perform any other action to the GPS receiver.

- Delivery of GSV, GSA, GGA, GLL, and ZDA NMEA strings to the test PC.

Please provide written instructions for:

- Connecting any cables.

- Powering the device.

- Charging the battery, and configuring the device (as required).

Deliverables

The output from this effort will be presented in a written report with major sections covering:

- The test setup

- Performance assessment test results

- Suggestions on next steps to resolve identified issues (if any)

www.taoglas.com