GSA.31 Street View Auto Ready Conformance Testing





Service name:

GSA.31 Street View Auto Ready Conformance Testing

Deliverables

Conformance Test Report

Duration:

3 Days

Items:

- A. Test in 3D Anechoic Chamber Pass/Fail Conformance 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 required conformance (pass/ fail) testing required to achieve this certification. A second service, GSA.32, provides the optional performance 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.

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 inband 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.

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The Process

Taoglas will use our GPS constellation simulator and anechoic chamber to verify radiated tracking and acquisition sensitivity meet a **minimum performance standard** at 15° intervals in one hemisphere. From these test results, your engineers will be able to clearly see if the GPS is performing adequately for basic GPS operation.

If more detailed performance testing is desired, Taoglas offers a separate service (GSA.32) to assess the GPS receiver performance according to the optional Google Street View Assessment test procedures. These optional tests provide more insight into how well your device performs, allowing you to further optimize performance if desired.

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?

Our lab will need 2 test units: one to test and a backup. Your product must bring out NMEA strings to a COM port on a Windows PC. We will need any special cables, adapters, and software required to interface the device under test to the PC. The preferred interface is RS232. If the device is using USB or Ethernet, you must provide any software required for the device's GPS port to show up as a logical COM port in Windows. The PC is running Windows 8 64 bit. Please provide a power cable for the device. If the device is battery-powered, please provide a battery charger or charging cable. The testing may take 1-2 hours.

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
- Pass/fail conformance test results
- Suggestions on next steps to resolve identified issues (if any)





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