

Experimental License Application Narrative

Velociti LLC (“Velociti”) (FRN: 0036506939) is proposing Global Positioning System (“GPS”) operations within their production facilities for testing purposes.

Specifically, Velociti seeks to illuminate part of the facility, located at 4400 NW 41st St Suite 400, Riverside, MO, with a GPS signal to test indoor utilization of GPS technologies within telematics devices. Such testing seeks to facilitate continued product safety. In addition, further design, development, and enhancement of existing GPS applications will provide greater efficiency and more effective means of utilizing GPS derived information. Accordingly, prompt grant serves the public interest.

In accordance with Section 8.3.28 of the National Telecommunications and Information Administration Manual, Velociti confirms that:

1. Individual authorization is for indoor use only, and is required for each device at a specific site.
2. Applications for frequency assignment were applied for as an XT station class with a note indicating the device is to be used as an Experimental RNSS Test Equipment for the purpose of testing GPS receivers and describing how the device will be used.
3. Approved applications for frequency assignment will be entered in the GMF.
4. The maximum length of the assignment will be two years, with possible renewal.
5. The area of potential interference to GPS reception (e.g., military or contractor facility) has to be under the control of the user.
6. The maximum equivalent isotropically radiated power (“EIRP”) must be such that the calculated emissions are no greater than -140 dBm/24 MHz as received by an isotropic antenna at a distance of 100 feet (30 meters) from the building where the test is being conducted. The calculations showing compliance with this requirement must be provided with the application for frequency assignment and should be based on free space propagation with no allowance for additional attenuation (e.g., building attenuation.).
7. GPS users in the area of potential interference to GPS reception must be notified that GPS information may be impacted for periods of time.
8. The use is limited to activity for the purpose of testing RNSS equipment/systems.
9. A "Stop Buzzer" point of contact for the authorized device must be identified and available at all times during GPS re-radiation operation of the device under any condition.

“Stop Buzzer” Contact Information:

Name: Deryk Powell
Title: Chief Executive Officer
Phone Number: 913-551-0123
Email Address: deryk.powell@velociti.com

Velociti provides additional information on EIRP and antenna location.

EIRP Information:



Your source for quality GNSS Networking Solutions and Design Services, Now!

1 of 2

Change the values in the yellow boxes to calculate required readings

Receive Ant Gain	Ant Cable Insertion Loss	Repeater Amp Gain	Repeater Ant Gain Best Case	Range in Feet	Repeated Signal Power @ Range In dBm
33	-12	29	3	20	-129.11
GPS Carrier Frequency MHz		Total System Gain		Range in Miles	Total Signal Power @ Range in Watts
1575		53		0.00	122.6E-18
Avg Receive Power L1 dBm North America				Range in Meters	Radiated Power dBm
-130				6.23	-77
Free Space loss with Isotropic Antennas				Range in Kilometers	Transmitted Power (pW)
-52.11				0.01	9.6
Effective Radiated Power (pW)					
19.2					
Effective Isotropic Radiated Power (pW)					
31.5					
Effective Radiated Power (dBW)					
-107					

Author: Allen Gross
 Doc. No.:22

Org.:Sales and Marketing
 Rev.:002

12/27/2021

Antenna Location:

