

GPS Re-Radiation (Re-Rad) System Technical Description

Filed by:
Insitu Inc.
Torsten Mack
Principal Engineer, RF Communications
118 East Columbia River Way
Bingen, WA 98605
torsten.mack@insitu.com
Office: 509-493-6459

Technical Description Exhibit

This technical description shows compliance with all NTIA items in Chapter 8.3.28.

Purpose for the Application

The purpose of this application is to obtain a full 2-year experimental license to operate a GPS re-rad system to support Unmanned Aerial Vehicle (UAV) development and testing.

Why we are Applying for a License

Insitu would like the ability to perform functional testing of receive GPS systems inside a building in order to reduce delivery delays caused by the unavailability of GPS signals inside the facilities.

Locations

Bingen, WA 45-42-23N 121-27-29W

Technical Description

System: GPS
Frequency: L1 1575.42 MHz
Emission: 24M0G1D
Transmitter Output Power: 0.4 Pico watts
Effective Radiated Power: Maximum -93.0 dBm or 0.5 Pico watts

Frequency: L2 1227.60 MHz
Emission: 24M0G1D
Transmitter Output Power: 0.4 Pico watts
Effective Radiated Power: Maximum -91.1 dBm or 0.8 Pico watts

Frequency: L5 1176.45 MHz
Emission: 24M0G1D
Transmitter Output Power: 0.2 Pico watts
Effective Radiated Power: Maximum -93.1 dBm or 0.5 Pico watts

The system receives the GPS signals from a roof top antenna and re-transmits the signals inside the facility to allow production and flight test personnel to perform installation, testing and troubleshooting of the aircraft's GPS based systems. These systems will not be sold to the government or supplied to the Department of Defense as part of the contract.

Stop Buzzer Stop buzzer for this operation is Operations Action Center at (509) 493-4691