



FCC Form 422

Experimentation Description

5 October 2020

1 INTRODUCTION

Azure Summit Technology (henceforth referred to as *Azure*) is a small and growing advanced technology company with extensive expertise in RF system development for the US DoD. Established in 2007, Azure is headquartered at 3050 Chain Bridge Rd, Fairfax, VA 22030, with a satellite facility in Melbourne, FL.

2 TEST OVERVIEW

This experimental license for the range of 9300-9400 MHz will be used to develop and test receiver prototypes for evaluation of new technologies. Testing will be conducted at the Great Meadow Foundation, located at 5089 Old Tavern Rd, The Plains, VA 20198.

The test will employ one fixed transmitter and two or more receivers. The transmitter will consist of commercial-off-the-shelf (COTS) instruments and components configured appropriately to generate the test signals of interest. The receivers will be vehicle-mounted mobile radios designed and built by Azure.

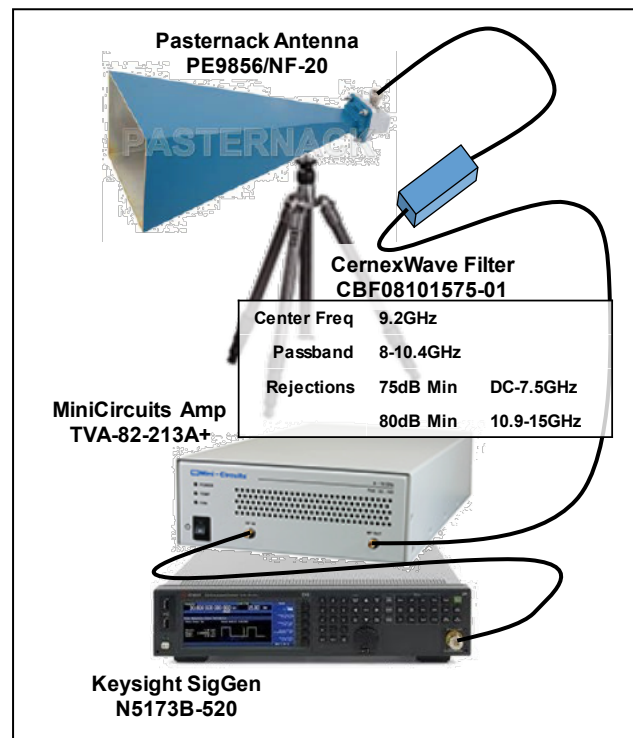
3 TRANSMITTER INFORMATION

The fixed transmitter equipment is depicted to the right. It is composed of the following COTS instruments and components:

Component	Vendor	Model
Signal Generator	Keysight	N5173B-520
Power Amplifier	MiniCircuits	TVA-82-213A+
Bandpass Filter	CernexWave	CBF08101575-01
20 dBi Antenna	Pasternack	PE9856/NF-20

The signal generator will be configured to generate pulsed frequency-modulated waveforms with the following characteristics:

- Frequency Band: 9300-9400 MHz
- Waveform Type: Pulsed LFM
- Pulse Duration: 2.5 msec
- Pulse Repetition Rate: 1 Hz
- Pulse Bandwidth: ≤ 50 MHz



Transmit power at the antenna port will be limited to ≤ 0.2 W, and a 20 dBi tripod-mounted antenna will be employed at a height of ≤ 6 feet, for an EIRP of ≤ 43 dBm.