



FCC Experimental License Application

The Oneida County Griffiss International Airport (RME) New York UAS Test Site respectfully requests an experimental license for our Saab, Inc. SR3 Next Generation Surface Movement Radar Improved (NGSMRi) system. The NGSMRi is a single radar sensor providing primary surface surveillance. This surface movement radar was previously licensed with callsign W12XTL, but that record has expired. There are no changes in operating parameters for this new license. The purpose of our request is continued testing of the surface movement radar as part of a multi-layered detect-and-avoid solution for the New York UAS Test Site. An experimental license is being requested because Saab, Inc. is still in the process of getting the system approved as a certified radar.

Type of Application (FCC Form 442 Question #12): Oneida County Griffiss International Airport (RME) New York UAS Test Site is a non-federal government entity. The Test Site is owned and operated by County of Oneida, State of New York.

Describe Scan Strategy (Antenna Section)

The NGSMRi has a single spinning antenna that rotates at approximately 60 RPM. The system operates with the antenna subsystem as an RF emitter and detector. The transceiver subsystem handles all RF conversions, waveform generation and signal processing.

Pulse Characteristic (IE Interlace Pattern, Stagger, Jitter etc.,)

Modulating Signal Details: This radar system operates with interleaved short and long range pulses while frequency hopping through 16 channels. The NGSMRi operates using interleaved short and long range pulses with a peak power of less than 200W. The short range pulse is a simple CW pulse that is 40 ns wide. The long range pulse is a 50 MHz LFM that is 4 μ sec wide. These are the same pulses that have been used for more than a decade for Surface Movement Radar applications. Saab Sensis has worked with the FAA through several programs including ASDE-X to optimize the performance of these radars.

If the system operates over several frequencies or frequency hops, please describe (Emission Information):

9.0 – 9.2 GHz X-Band RF, frequency hopping through 16 channels.

Additional Information (Additional Comments):

The NGSMRi is a primary surface movement radar that provides continuous 360 degree surveillance for radiolocation of objects on the airport surface using a rotating antenna. The antenna is capable of blanking in sectors. The NGSMRi radar will be used to support situational awareness at the New York UAS Test Site. The period of time requested for the experimental license is 24 months.