

1: Purpose of Operation

The Purpose of the frequency authorization is for ground-based testing of the X-Net Radio. Raytheon Intelligence &Space (RIS) would like to request available frequency bands in the range of 420 – 449.75 MHz, 1370 – 1435 MHz, 1525 - 1722 MHz, 1722 – 2395 MHz and 2395 – 2500 MHz

2: Technical Synopsis:

Spectrum needed:

420 - 449.75 MHz

1370 - 1435 MHz

1525 - 1722 MHz

1722 - 2395 MHz

Exclude the Following AFTRCC Frequency Bands:

1435 – 1525 MHz

2310 – 2320 MHz

2345 – 2390 MHz

Exclude the Following Iridium Frequency Bands:

1618.725 – 1626.6 MHz

Equipment:

Manufacturer: Antenna Products Antenna Products Hascell-Denke

Model Number: WB5600S WB-1048M MPDP700X4AB

Antenna Gain: 2 dBi 1 dBi / 7 dBi 2.5 dBi

Hascell-Denke

Model Number: MPDP100X25

Antenna Gain: 0 dBi / -5 dBi

Antenna Polarization: Vertical

Antenna Horizontal Plane: Omnidirectional

Power levels requested:

Frequency: 420 – 449.75 MHz

Output Power: 5W/37dBm

ERP 1: 33.67 dBm / 2.3 Watts

ERP 2: 41.38 dBm / 13.7 Watts

ERP 3: 34.38 dBm / 2.74 Watts

Frequency 1370 – 1435 MHz

Frequency 1525 – 1722 MHz

Output Power: 3.2W/35dBm

ERP 1: 16.48 dBm / 0.04 Watts

ERP 2: 33.61 dBm / 2.30 Watts

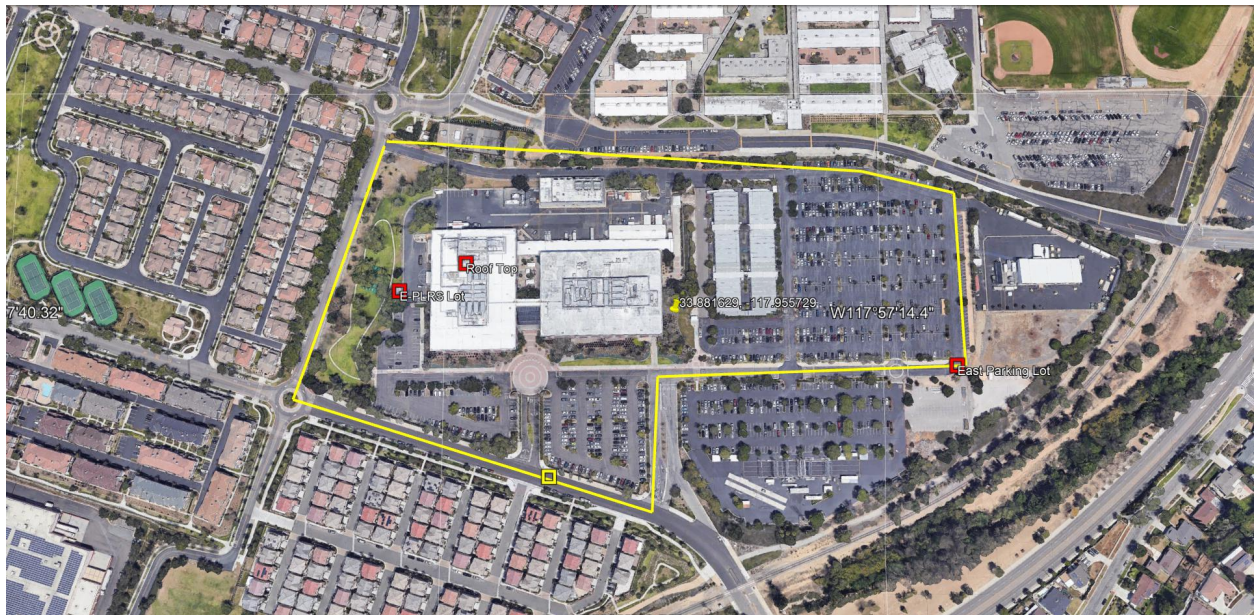
ERP 3: 34.11 dBm / 2.58 Watts

Frequency 1722 – 2310 MHz
Frequency 2395 – 2500 MHz
Output Power: 3.2W/35dBm
ERP 1: 12.42 dBm / 0.02 Watts
ERP 2: 33.31 dBm / 2.14 Watts
ERP 3: 33.81 dBm / 2.4 Watts

Modulation: Phase Modulation
Occupied Bandwidth: 1.2 MHz
Type of Signal: Data Communications
Type of Information: Video, Position Reporting, Control Information

Location of use:

City: Fullerton, CA (Orange County) 33°53'47"N 117°57'18"W
Hours of Operation: 8:00 AM – 2:00 PM
Length of Daily Transmission: 4 hours a day.
Site Above Mean Sea Level: 100 Meters
Antenna Feed Point Height: 2 Meters
Distance to Nearest Aircraft Landing Area: 5 Kilometers
Radius: 300 Meters



Stop buzzer contact:

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File Number:

Class of Station: Fixed/Mobile

Station Location: Fixed/Mobile

Effective Date: 11/01/2021

Expiration Date: 10/31/2023

3: Experimental Explanation:

Test the performance of the X-Net radio in Fullerton, CA

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