5.925-6.425 GHz Experimental License Application

1 Introduction

Qualcomm's technologies powered the smartphone revolution and connected billions of people. We pioneered 3G and 4G – and now we are leading the way to 5G and a new era of intelligent, connected devices. Our products are revolutionizing industries, including automotive, computing, connectivity, IoT, healthcare and data center, and are allowing millions of devices to connect with each other in ways never before imagined. Qualcomm Incorporated includes our licensing business, QTL, and the vast majority of our patent portfolio. Qualcomm Technologies, Inc., a subsidiary of Qualcomm Incorporated, operates, along with its subsidiaries, all of our engineering, research and development functions, and all of our products and services businesses, including, our QCT semiconductor business. For more information, visit Qualcomm's website, OnQ blog, Twitter and Facebook pages.

Qualcomm is conducting general development testing of Wi-Fi and 5G NR technologies in addition to testing specifically for UNII5 devices that the FCC has proposed to allow in ET Docket No. 18-295 Unlicensed Use of the 6 GHz Band, and needs to complete over the air performance at a variety of locations in the range of 5.925-6.425 GHz.

Qualcomm respectfully requests the Commission to grant an experimental license to enable Qualcomm to complete this important experiment.

2 Transmitter Information

Experimental testing is expected to occur daily during the period of the license grant. Prototype equipment will be tested inside a variety of building sites specified in Table 1 and shown in area Figures 1a, and 1b.

Access points and client devices use TDD multiplexing, possible beam forming direction, and use either one carrier at a time having a bandwidths and corresponding emission designators of 20,40, 60, 80 100 or 160MHz, 20M0DXW → 160M0DXW respectively.

One channel frequency, for each carrier type will operate in the requested range of 5,925 – 6,425 MHz at each building location. The channels selected will be based upon the available spectrum selected to avoid interference with incumbent services as needed per special conditions for the license. All buildings reduce the transmitted signal strength to the outside by a minimum of 10dB.

Area or site #	Transmitter area or site address	County	Latitude (N)	Longitude (W0	Height range AGL (m)
Area 1	Within 1 km radius of 5665 Morehouse Dr. San Diego, California, 92121	San Diego	32° 53′ 50.70″	117° 11′ 53.02″	1-40
Area 2	Within a 250m radius of 1700 Technology Drive San Jose, California, 95110	San Jose	37° 21′ 55.65″	121° 54′ 54.97″	1-20
Site 1	3105 Kifer Road Santa Clara, California, 95051	Santa Clara	37° 22′ 30.19″	121° 59′ 03.88″	1-5
Site 2	15015 Bohlman Road Saratoga, California, 95070	Saratoga	37° 14′ 59.59″	122° 02′ 25.66″	1-5

Table 1 Transmitter locations

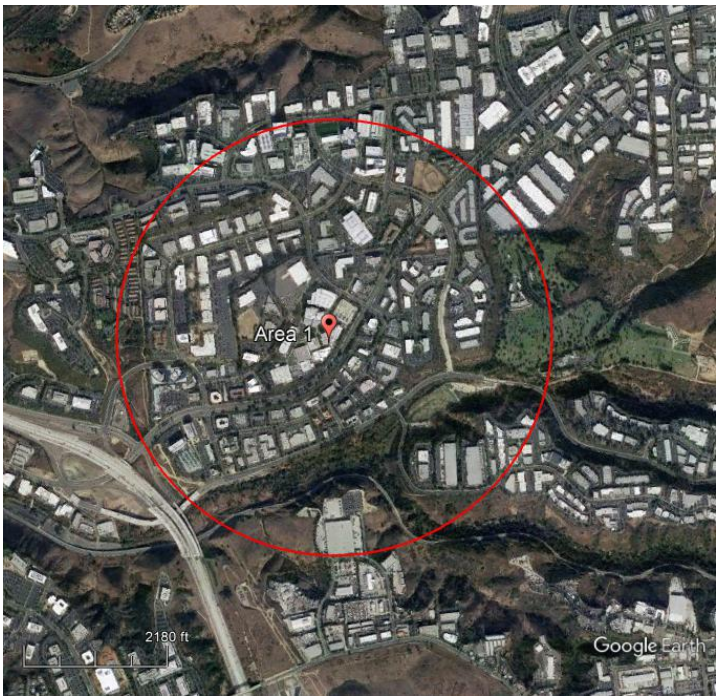

Figure 1a San Diego Area locations

Figures 1b San Jose Area locations

		Maximum EIRP				
Type	**Center Frequency**	**dBm**	**dBW**	**Watts**	**W ERP**	**Peak Antenna Gain (dBi) pointing**
Access point/gNB and client/UE devices	Variable vs. location depending on spectrum availability	30dBm	0	1	0.61	6 any direction

Table 2. Transmitter carrier Information

3 License Requested

Qualcomm respectfully requests the Commission grant an experimental license to enable Qualcomm to begin testing in the proposed U-NII5 band and make over the air measurements.

4 Points of Contact to stop transmission

The following points of contact are available as a stop buzzer.
Email qualcomm.transmitter.shutdown@qti.qualcomm.com; or brjones@qti.qualcomm.com
John Forrester
5775 Morehouse Drive
San Diego
CA 92121
858-845-7428