

3700-3800 MHz Experimental License Application for 5G Development Work

1 Introduction

At Honeywell, we are blending physical products with software solutions to link people and businesses to the information they need to be more efficient, more productive, and more connected. Honeywell (www.honeywell.com) is a Fortune 100 software-industrial company that delivers industry specific solutions that include aerospace and automotive products and services; control technologies for buildings, homes, and industry; and performance materials globally. Our technologies help everything from aircraft, cars, homes and buildings, manufacturing plants, supply chains, and workers become more connected to make our world smarter, safer, and more sustainable. For more information on Honeywell, please visit www.honeywell.com

This experimental license request is in support of a small 5G R&D development network planned for operation indoors at a Honeywell building. The R&D network will utilize a 100 MHz transmission bandwidth within the frequency range of 3.4-3.55 GHz.

The requested frequency range of 3.7-3.8 GHz is for technology development purposes only and not targeted for future wireless communication deployment in the United States.

2 Experiment Description

This experimental license is critical for Honeywell to develop applications for 5G technology wireless communications systems.

The network is designed to generate the smallest amount of RF interference to incumbents in the requested frequency range while also providing the RF coverage area required for engineering development and showcasing advanced wireless technology.

The network utilizes 5-10 indoor base station transmitters to provide the RF coverage area to a maximum of 30 mobile devices anywhere inside the building. The base stations use directional antennas that will be orientated in different directions. The maximum transmit power of the base station and mobile devices is respectively 35dBm EIRP and 25dBm EIRP. The intent is to operate the networks 24 hours per day, 7 days per week.

3 Transmitter Information

The test network utilizes a single TDD 100 MHz channel bandwidth transmitted in the range of 3700-3800 MHz. Both fixed and mobile transmitters use OFDM modulation with a FCC emission designator of 100M00W7W. Table 1 describes the technical parameters of the indoor transmitters. The base station is considered an omnidirectional source since there are no orientation constraints.

Table 1 Transmitter Information in the frequency range of 3.4-3.550 GHz

Site Address	Longitude Latitude	Building Height AGL (m)	Transmitter Type	Antenna Type	EIRP / 100 MHz [dBm]	EIRP / 100 MHz [W]	ERP / 100 MHz [W]
7901 Innovation Way Mason, OH 45040	39 19 25 N 84 17 30 W	<16m	Fixed Indoors (5G Base station)	Omni	35	3.16	1.92
			Mobile (indoors)	Omni	25	0.3	0.19

4 Interference Coordination

Immediate requests for Honeywell to stop transmission should be emailed to MasonStopTransmitFCC@Honeywell.com. Alternatively, a shutdown requested can be submitted through [Justin Zimmer](#) name who can be contacted at 937-554-5247 or justin.zimmer@honeywell.com