

**Kymeta Corporation
Application for Experimental License**

Narrative Statement

(1) Name, address, phone number (also e-mail address and facsimile number, if available) of the applicant.

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(2) Description of why experimental authorization is needed.

Kymeta is developing an electronically steerable flat panel antenna technology that could significantly improve performance, expand use cases, and lower costs in commercial deployments. Grant of the experimental authorization will allow Kymeta to test and demonstrate its technology with Ku-band satellite systems.

(3) Description of the operation to be conducted and its purpose.

Kymeta will test and demonstrate its antenna technology from fixed locations and mobile platforms in the United States. Kymeta requests authority to operate up to 25 units with any Ku-band satellite that is authorized to operate in the United States. The purpose of the testing is to refine the ability of the assembled RF technology to both transmit and receive a Ku-band digitally modulated transmission. The purpose of the demonstrations is to show the technology to prospective partners and customers.

The parameters are identical for transmission to all of the satellites.

(4) Time and dates of proposed operation.

Kymeta requests an experimental license for a period of 2 years commencing February 1, 2019 and ending February 1, 2021.

(5) Class(es) of station (fixed, mobile, fixed and mobile) and call sign of station (if applicable).

The transmitting station will operate in fixed and mobile modes.

(6) Description of the location(s) and, if applicable, geographical coordinates of the proposed operation.

United States

(7) Transmit equipment to be used, including name of manufacturer, model and number of units.

Kymeta FPA (experimental Ku-band antenna)

(8) Frequencies desired.

Transmit: 13.75 – 14.50 GHz

Receive: 11.70 – 12.20 GHz

Although communications will be in both directions, the application for an experimental license does not seek authorization to receive in the space-to-earth downlink bands.

(9) Maximum output power and maximum effective radiated power (ERP) or equivalent isotropically radiated power (EIRP).

40 W output power; 50.5 dBW EIRP; 48.35 dBW ERP

(10) Emission designator (see §2.201 of this chapter) or describe emission (bandwidth, modulation, etc.)

Transmit: 100KG7W to 5M00G7W (channel bandwidth: 100 kHz to 50 MHz)

(11) Overall height of antenna structure above the ground (if greater than 6 meters above the ground or an existing structure, see part 17 of this Chapter concerning notification to the FAA).

The overall height of the antenna above ground level (or roof top level) will not exceed 6 meters.

(12) Additional Technical Information

Width of beam of transmit antenna in degrees at half-power point: 1.50.

Width of beam of receive antenna in degrees at half-power point: 2.00

Satellite coverage: narrow beam (NB) and earth coverage (EC).

Transmit antenna gain: 34.5 dBi.

Receive antenna gain: 34.0 dBi.

The antenna will transmit and receive using circular polarization.

Frequency tolerance: 0.001%.

Transmit antenna azimuth: Various. The application seeks authority for the earth terminals to operate anywhere in the U.S. Thus, the azimuth will vary.

Elevation of transmit antenna MSL (in meters): Various. It will depend on the location of the earth terminal.

Elevation of transmit antenna AGL (in meters): Various. It will depend on the location of the earth terminal.

Stop buzzer POC:

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