

**Kymeta Corporation
Application for STA for Experimental License for
Testing with O3b from CONUS**

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 an experimental license is needed.

Kymeta is developing a microwave antenna technology that could significantly improve performance and lower costs in commercial deployments. Grant of the experimental license will allow Kymeta to test its technology with the O3b non-geostationary satellite system.

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

Kymeta will test its antenna technology from fixed locations in the Continental United States (CONUS). The purpose of the tests is to demonstrate that the Kymeta beam steering technology and antenna can track satellites within the O3b non-geostationary satellite system.

(4) Time and dates of proposed operation.

Kymeta requests an STA for six months, from November 15, 2014 to May 15, 2015. Kymeta will notify ViaSat, Inc., Hughes/EchoStar, Inmarsat, and SES, the other U.S. authorized Ka-band satellite operators, at least one week prior to any transmit testing, and provide emergency contact information. In the event that interference is reported, Kymeta will immediately cease transmissions.

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

The transmitting station will operate in fixed mode.

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

CONUS. Kymeta will notify the FCC at least seven days prior to testing of the geographical coordinates of the test site. In addition, if the test will be conducted in spectrum bands shared with terrestrial operators, Kymeta will complete frequency coordination prior to testing.

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

Kymeta mTenna (experimental)
Kymeta mTX.o3b (experimental)

(8) Frequency(ies) desired.

Transmit:
27.6 – 28.4 GHz
28.6 – 29.1 GHz

Receive:
17.8 – 18.6 GHz
18.8 – 19.3 GHz

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

Input power will be 10 W; the maximum output power (in ERP) will be 40 kW.

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

50M0M1D
8M0M1D

50M0M7D
8M0M7D

(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 Information

Directional antenna: Yes?

Width of beam in degrees at half-power point: 1.20

Orientation of horizontal plane: N/A

Orientation of vertical plane: N/A

Frequency tolerance: 0.28%