

Kymeta Corporation
Application for STA 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 an STA is needed.

Kymeta is developing a microwave satellite antenna technology that could significantly improve performance and lower costs in commercial deployments. Grant of the STA will allow Kymeta to test its technology with a ViaSat satellite.

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

Kymeta will test its antenna technology from its headquarters in Redmond, Washington. Kymeta will create a two-way satellite link with the ViaSat ANIK F2 satellite at 111.1° W.L. Baseline testing will demonstrate the ability of the assembled RF technology to both receive and transmit a Ka-Band digitally modulated transmission. After the baseline testing has been completed, Kymeta will test the ability of its mTenna technology to transmit a Ka-band digitally modulated signal and to create a two-way satellite link.

(4) Time and dates of proposed operation.

Testing will occur between September 1, 2014 and March 1, 2015 – a period of six months. Kymeta will notify 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.

The transmitter will be located in the parking lot or on the roof of Kymeta's Corporate Headquarters in Redmond WA. The address is set forth in Item 1 above. The coordinates of this location are: 47° 42' 35" N, 122° 09' 46" W.

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

New Equipment Testing:

1. Kymeta mTenna experimental Ka-band antenna
2. ViaSat ATRIA model X0101800A001 Satellite Broadband Terminal

(8) Frequency(ies) desired.

Transmit: 14.0 – 14.5 GHz
Receive: 11.7 – 12.2 GHz

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

The maximum transmitted EIRP will be 44.5 dBW.

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

625KG7D, 625 kBd PSK, Digital Carrier
1M25G7D, 1250 kBd PSK, Digital Carrier
2M50G7D, 2.5 MBd PSK, Digital Carrier

5M00G7D, 5.0 MBd PSK, Digital Carrier
10M0G7D, 10.0 MBd PSK, Digital Carrier
20M0G7D, 20.0 MBd PSK, Digital Carrier

(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).

Antenna height will not exceed 6 meters above ground level or roof-top level.