

**Kymeta Corporation
Application for STA for Experimental License for
Earth Station on Vessel Testing**

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 and demonstrate its technology on a vessel at sea.

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

Kymeta will test and demonstrate its antenna technology on a U.S.-flagged container ship traveling between Seattle and Oakland. The purpose of the test is to demonstrate that the Kymeta beam steering technology and antenna mounted on a mobile platform can track and transmit to a fixed satellite.

(4) Time and dates of proposed operation.

Kymeta requests an STA for January 15, 2017 through April 15, 2017.

(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 mode, with the following Ku-band satellite:

Yamal 300K (operated by Gazprom Satellite Systems) at 177° W.L.

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

The container ship will travel between Seattle and Oakland.

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

Kymeta mTenna – cylindrical/radial (experimental)

(8) Frequencies desired.

Transmit: 14.0 – 14.5 GHz

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

16 W output power; 44.1 dBW EIRP; 41.95 dBW (40 kW) ERP

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

Transmit: 100KG7W to 18M0G7W
Enter as G 7 W

(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 antenna will be mounted on the ship and will not exceed the height of the ship.

(12) Additional Information

Width of transmit beam in degrees at half-power point: 1.75°.

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

Satellite coverage: both narrow beam and wide beam.

Receive antenna gain (maximum): N/A

The antenna will transmit using linear polarization.

Frequency tolerance: 0.001%.

Transmit antenna azimuth: Various.

Elevation of transmit antenna MSL (in meters): antenna will be at sea level.

Elevation of transmit antenna AGL (in meters): antenna will be at sea level.

Maximum transmit antenna gain (dBi): 32.1 dBi.

Stop buzzer POC: Amy Bensinger – see page 1 for contact information.