

**Kymeta Corporation
Application for STA for Experimental License**

Demo for Detroit Auto Show

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 antenna technology that could significantly improve performance and lower costs in commercial deployments. Grant of the STA will allow Kymeta to demonstrate its technology at the Detroit Auto Show in Detroit, MI in January 2016.

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

Kymeta will create a very low power point-to-point link. The transmitting portion of the link (using a commercial horn antenna) will be positioned 4 meters or less above the receiving portion of the link (using a flat panel Kymeta antenna). Kymeta will demonstrate the ability of its antenna to self-acquire the far-end transmitting signal. *All transmissions will be toward the ground.* There will not be a return link from the Kymeta antenna.

(4) Time and dates of proposed operation.

January 4, 2016 – January 24, 2016.

(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.

Inside the Cobo Convention Center in Detroit, MI
Coordinates: 42-19-36 North; 83-02-58 West

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

Transmit:

- Penn Engineering 9034-1B10-NN -- 20 dBi Standard Gain Horn
- Kymeta up converter

Receive:

- Kymeta mTenna experimental antenna

(8) Frequency(ies) desired.

10.70 - 12.75 GHz

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

The maximum transmitted EIRP will be 2 Watts (+33 dBm)
Maximum transmitted power will be +13 dBm.

Kymeta notes that the power level is less than the power level permitted by Section 2.805 of the FCC's rules for experimental operations at trade shows -- for which no authorization is required.

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

10M0W1F -- 10 MHz, QAM, modulated with IP generated video signal.

(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. The antenna and transmitting equipment will be inside a building.

(12) Additional Technical Information

Width of beam in degrees at half-power point: 35°.

The antenna will transmit and receive using circular polarization.

Frequency tolerance: 0.0025%.