

Form 442
Application for Modification of
Conventional Experimental Authority

Call Sign WJ2X00
File No. 0342-EX-CN-2018

Attachment 1
Narrative Statement

Pivotal Commware (Pivotal) is developing Holographic Beam Forming (HBF) antenna technology that will improve the capacity, coverage and throughput of wireless networks.

Pivotal seeks to modify its conventional experimental authorization to undertake testing and perform demonstrations of its HBF technology in the following band:

- 39.5 – 40.0 GHz

Pivotal recognizes that this band is shared with federal government services. However, Pivotal notes that in a 2016 letter filed in Docket 14-177, NTIA stated that:

Given the existing regulatory constraints in the 39.5 – 40 GHz band, the NPRM’s proposed non-Federal fixed and mobile operations will not impact Federal operations in the 39.5 – 40 GHz band. FCC 16-89 at para. 136.

Pivotal plans to undertake testing at various fixed locations around the United States. Pivotal plans to test within spectrum already licensed to a service provider, in conjunction with the licensee or with prior consent of the licensee.

The technical details of the testing are set forth below.

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

Pivotal Commware Model Echo, 28 GHz device, 20 units.

Pivotal Commware Model Taurus, 39 GHz device, 20 units.

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

Maximum (peak) EIRP will be +44 dBm (14 dBW), or 25.2 Watts, which translates to ERP of 41.85 dBm (11.85 dBW), or 15.3 Watts.

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

100MG7W

Additional Information

Frequency tolerance: 0.001%

Width of transmit beam in degrees at half-power point: 5 degrees in azimuth and 20 degrees in elevation for broadside scan; 10 degrees in azimuth and 30 degrees in elevation for scan 60 degrees.

Width of receive beam in degrees at half-power point: same as transmit

Antenna gain (maximum): 23 dBi.

Polarization: Linear

Stop buzzer POC: Mersad Cavcic – 206-369-7682