

Mike Kuo

From: Kathy Yao
Sent: August 30 2004 11:22 AM
To: Mike Kuo
Cc: Chuck Cowden; Claire Hoque
Subject: RE: Aperto Networks Inc. , FCC ID: PS6R3002-A1, Assessment NO.: AN04T4114, Notice#1
Importance: High

-----Original Message-----

From: Claire Hoque
Sent: Wednesday, August 25, 2004 1:42 PM
To: Mike Kuo
Cc: Kathy Yao
Subject: RE: Aperto Networks Inc. , FCC ID: PS6R3002-A1, Assessment NO.: AN04T4114, Notice#1

Hi Mike,

Here are the answers.

Question #1: The proposed antenna to be used with this point-to-point operation is phased array antenna with multiple radiating elements. Please address the following issues related to phased array antenna:

- a. How many beams can be transmitting simultaneously
- b. What are the beamwidth
- c. How many radiating elements in the antenna
- d. What is the max. output power for each element
- e. What are the aggregate transmitted power simultaneously

<Aperto>Aperto system is not Phase array system.

"patch," not "phased" Patches, or simply a number of blobs of copper in a square shape slapped(etched) on a flat dielectric material that direct the beam in the proper direction within a limited angle. Also known as flat panel antennas.

A phased arrayed system on the other hand, requires two or more antenna elements (4 typical, but can even be 16 or more) , where the electromagnetic wave arriving at these elements is separately controlled by a digital signal processor in a manner such that the phases of said signals add and cancel according to an algorithm that makes the signal emanating from the entire phased-antenna-system directional and controllable in real time.

A fairly complex system which at times collapses under its own complexity. Ours is just a simple 'antenna,' with dual polarity, but only one functioning at a time and with equal gain and symmetry in either polarization.

Question #2: The MPE estimate is using the total output power measured at antenna connector which may not be the true effective power to each of radiated element. Please consider the aggregate output power to the number of active radiating elements and submit MPE estimate again.

<answer>no need based on Q1 answer.

Question #3: What is the data rate used during each of test.

<Aperto>we do all these tests at 4.77 Mbaud.

Question #4: The specification in A-3 of user manual listed the operating frequency for 5.8GHz unit is from 5725 - 5875MHz which does not agree the operating frequency range and the specified frequency range is outside the authorized frequency band allowed in section 15.247 of FCC rules. Please explain.

<Aperto>Aperto Networks sells this product world-wide and some customers have spectrum outside of the designated US frequency band. These customers accept the FCC certification with the stated wider frequency band for their regulatory certification. US customers are obliged to only operate within the limits of frequencies specified by CFR47.15.247 but we want to note in the report that the device was tested to a wider frequency range.

Question #5: How many channels are allowed within 5728 - 5847MHz band /

<Aperto>20 in 6 MHz channels; 40 in 3 MHz, and any combination of these that results in less than 120 MHz of BW

Thanks,

Claire