

Office of Engineering and Technology

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From: Jyun-Cheng Chen
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Re: FCC ID: PIDASMAX2300

Applicant: Airspan Networks Inc

Correspondence Reference Number: 40466

Form 731 Confirmation Number: EA879194

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Thank you for your 10/14 response to my 9/23 request for clarification. After review of your application, please address the following issues:

1. The WiMAX duty cycle attestation letter is incorrectly titled "DFS Declaration." Please also clarify what is considered to be "higher ratio than 31:16" in the letter? Is 32:15 a higher or lower ratio?

The ratio in our original description is "upload symbol length divided by frame length (i.e. ratio=UL/frame length=16/48 for DL/UL ration of 31:16)"

2. Does the device support mobile station FDD mode? If not, please add in the above TDD duty cycle attestation letter. If yes, please describe the FDD usage.

The device does not support FDD mode.

3. Please elaborate on "Hardware configuration for the device is only for 2316.75 MHz and 2348.25 MHz and can not be modified by any method to support any other frequency." (10/14 Letter) Unfortunately, we could not verify this statement with the block diagram and the schematics. Due to this and information presented elsewhere in the application, an attestation statement is required that the EUT will only operate on the two fixed frequencies 2316.75 MHz and 2348.25 MHz as well as 5 MHz emission bandwidth only. In addition, please explain how this hardware configuration is accomplished.

The channel limitation is implemented by both software and hardware. The system software is programmed to limit the selection only from channel 2316.75MHz or 2348.25MHz. Also, an external dual band-pass filter is attached to the system as show in the attached block diagram. The band-pass filter is such designed that it will allow only mentioned two channel frequency (with 5MHz channel BW, please refer to attached filter spec) to pass through the system for signal purity enhancement. As explained, either from software or hardware limitation, the system will allow only two mentioned channels and BW to work and there is no other combination for user to select from. We hope this clarify the concern.

4. Per 47 CFR 27.50(a)(2), fixed CPE equipment must employ automatic transmit power control (ATPC). Please attest ATPC has been implemented or elaborate on the reason for exemption.

ATPC is a test item for WiMAX forum CRT. Please check following requirement from WiMAX forum RCT test and also check attached WiMAX certificate.

9.1.17 MS-15.1: MS transmit power dynamic range and relative step accuracy

The purpose of this test is to verify compliance of MS equipments for Transmit Power Control (TPC) dynamic range and Power Step accuracy for both open loop and closed loop.

9.1.17.1 Introduction

Mobile WiMAX System Profile and IEEE 802.16 specification requires a MS transmitter to have a minimum Power Control Range with a minimum Power Level step size. The Power Level step size must conform to a minimum Relative Step Accuracy.

In the Mobile WiMAX PICS section A.5.1.1.1.18 , Table A.81 the 16d standard is Referenced, Section 8.4.12.1.

9.1.17.3 Testing requirements

These tests will test the compliance of the MS to the requirements given in the 802.16e standard or WiMAX profiles. In particular the tests concern the radio conformance of the MS unit. The tests are designed to minimize the use of the MAC layer and do not rely on the performance of the BSE except where conformance of this test is required.

These Tests require a BSE and MS connection. The BSE will command the MS to change its power in m dB decrements. The BSE and a Vector Signal Analyzer will both monitor the MS power output. The power level into the BSE will be adjusted so that it is always within its operating range.

5. Please correct inconsistency of different MPE distances listed. On the FCC label it is stated to be 20 cm, and 50 cm on Page 2-34 of the User Manual. Based on calculation, actually 21 cm (20.48 cm to be exact) is sufficient to meet the MPE limit.

50cm is the safety distance defined by client. And we find 20 cm is mentioned on label sample only.
Revised label sample will be provided to FCC website.

6. Please explain why QPSK is selected for emission bandwidth, peak-to-average ration, band edge and spurious emission measurement while 16QAM is known to have higher peak-to-average ratio and more susceptible to noise and hardware imperfection and thus would result in wider bandwidth?

Adding 16QAM test for peak-to average, bandwidth and band edge measurement.

P23~24 of revised report is for bandwidth measurement

P27 of revised report is for peak to average ratio.

P34`37 of revised report is for band edge measurement.