



American Telecommunications Certification Body Inc.
6731 Whittier Ave, McLean, VA 22101

December 12, 2003

RE: Airspan Networks

FCC ID: PIDAIRSPAN-BSR900

After a review of the submitted information, I have a few comments on the above referenced Application.

- 1) The information on the label can not be distinguished. Please provide a higher resolution version of the label.
- 2) Information given in the antenna specifications mention that the connection is an N connector (page 4), however this application does not currently include information regarding professional installation to meet the requirements of 15.203. The device will either require justification for professional installation or else it must use non-standard connectors. Professional Installation requires a cover letter justifying professional installation. The letter should address the following 3 items:
 - a) Marketing
 - example: The device cannot be sold retail, to the general public or by mail order. It must be sold to dealers.
 - b) Requires professional installation;
 - examples:
 - installation must be controlled.
 - installed by licensed professionals (EUT sold to dealer who hire installers)
 - installation requires special training (special programming, access to keypad, field strength measurements made) What is unique, sophisticated, complex, or specialized about your equipment which REQUIRES it to be installed by a professional installer?
 - c) Application
 - example: The intended use is generally not for the general public. It is generally for industry/commercial use.
- 3) The Block Diagram and schematics appear to show 2 external antenna connections. From the design, it is also uncertain if both antennas can TX simultaneously, one at a time, or if one is strictly TX the other RX, etc. Please explain.
- 4) It does not appear that the complete manual was provided. Please provide as we would like to review several sections.

--- Continued on Next Page ---

- 5) It is not certain if this device may connect to a computer during normal operation, or only for configuration purposes. Please explain. Note that if it may be connected to a computer during normal operation the device is also considered a class B PC peripheral subject to a DoC or Certification for this part of the device. However currently the device does not appear include proper labeling (15.19) or manual information (2.1077) regarding a DoC. Please explain and provide the appropriate information if applicable.

COMPLIANCE INFORMATION (47CFR 2.1077)

If a product is tested and authorized under a Declaration of Conformity, a compliance information statement shall be supplied with the product at the time of marketing or importation, containing the following information on a single page:

- (1) Identification of the product, i.e. name and model number.
- (2) A statement similar to that contained in Section 15.19(a)(3) that the product complies with Part 15 of the regulations.
- (3) The identification, by name, address and telephone number, of the responsible party. The responsible party is defined as either the manufacturer, or if the equipment is imported, the importer. The responsible party for a Declaration of Conformity must be located within the United States.

NOTE: Alternatively, ATCB can also review the application as a composite application and issue 2 certificates (one for the TX, one for the PC peripheral portion), however additional information may be required and there are additional review costs associated with this.

- 6) Please provide a cover letter attesting and explaining of how the device meets the definition of a Digital Modulation for the DTS portion of the device. What type of modulation is used? Does it meet the definition of ANSI 63.17?
- 7) Note that there is a variety of ways to approve a hybrid system (see attachment). Recently approved devices for Airspan included both a FHSS and hybrid mode. Please explain if this device employs different operational modes or if it is always in hybrid mode. Note that there is a concern regarding FHSS mode only as the bandwidth is greater than that normally allowed for 900 MHz FHSS systems. The remainder of this application and comments was reviewed assuming the device is always in hybrid mode and can not normally operate in mutually exclusive modes.
- 8) The operational description states that the 20 dB bandwidth requirement is 1 MHz and the minimum number of hopping frequencies are 25 or 13. Note that if this device is always in hybrid mode, there are no normal requirements for these issues. Please adjust the operational description as this information is confusing. Note however that there are requirements for the power output.
- 9) The test report only mentions 2 data rates, while the operational description mentions 5 data rates. Please explain and/or correct the necessary exhibits.
- 10) It is not clear from plot A8 provided that the whole Ton time is shown. Please provide an updated plot.
- 11) It is desired for power measurements that the RBW be > than the 20 dB bandwidth. The 20 dB bandwidth in some cases is 2 MHz. Please provide new power measurements using a RBW = VBW = 3 MHz. Please update the report and RF exposure exhibit as necessary.
- 12) Note that there is not a requirement to comply with the 500 kHz minimum bandwidth if the device is always in hybrid mode, however there is a minimum channel separation requirement based on the 20 dB bandwidth. The channel separation should be $\geq$ 20 dB bandwidth. Please adjust section 4.4 to remove the 500 kHz limit and also show the 20 dB bandwidth.

--- Continued on Next Page ---

- 13) The results for Plot 49 appear to show incorrect calculations. Please verify.
- 14) For AC conducted emissions, there appear to be high peak measurements around 14 MHz that exceed the average limit, however data does not appear to be provided in the tables around this frequency range. It is not apparent that the emissions at 14 MHz will meet the Average limit requirements.



Timothy R. Johnson
Examining Engineer

[mailto: tjohnson@AmericanTCB.com](mailto:tjohnson@AmericanTCB.com)

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information may result in application termination. Correspondence should be considered part of the permanent submission and may be viewed from the Internet after a Grant of Equipment Authorization is issued.

Please do not respond to this correspondence using the email reply button. In order for your response to be processed expeditiously, you must submit your documents through the AmericanTCB.com website. Also, please note that partial responses increase processing time and should not be submitted.

Any questions about the content of this correspondence should be directed to the sender.