airespace

To: Mr. Tim Johnson, American TCB
From: David Waitt, Airespace
Subject: Inquiries regarding Certification application for FCC ID **QTZWNAP1200A**
Date: 22 April 2003

Tim,
Below are the replies to your inquiries regarding this application. The answers are numbered corresponding to your inquiries in your letter dated 18 April 2003. If something is unclear, or if you have additional concerns, please contact me.

Best Regards,

David Waitt
Consultant representing Airespace

ATCB 1) Your response regarding 15.407(g) mentions that the transmit frequency fundamental did not drift out of band. Please confirm that this includes all of the occupied bandwidth within 26 dB of the fundamental, and not just the center frequency.

Airespace: That is correct. No part of the signal within the 26 dB BW drifted out of band

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ATCB 2) The FCC ID specified on the letter for labeling lists a different FCC ID. Please explain.

Airespace: There was an error made when editing the document. The error has been corrected and a new label drawing has been uploaded.

ATCB 3) The users manual does not include the “indoor” operational statements specified in the exhibit “15_407_CDEG_a”. Please provide an updated users manual.

Airespace: The “Outdoor” statement has been added to the manual and a copy of the manual has been uploaded to the ATCB site.

ATCB 4) The power output specified in the test report is identical for 2 frequencies in dBm, but the mW is different. Please check the power output results and make any corrections necessary.

Airespace: The 19.7 dBm measurement is correct, the corresponding power in mW has been corrected

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ATCB 5) Not all of the bandwidth results shown in the plots match the tabular data. Please explain.

Airespace: There was an error made when transcribing one of the numbers from the plot to the table. The error has been corrected in the revised report.

ATCB 6) On page 38 of 51, it appears that that the limit may be miscalculated. Shouldn't the limit be –17 dBm – 5.9 dB?

Airespace: Correct, the limit calculated and shown in the report is in error. The limit has been corrected and a revised report uploaded to the ATCB site.

ATCB 7) The conducted emissions state that they device was tested from 150 kHz to 30 MHz using the new EN55022 harmonized limits. However, it is not certain what limits were applied. Additionally, results shown are only around 25-30 MHz. Please confirm the frequency range tested and the limits applied. Please correct as necessary.

Airespace: The AC line conducted emissions test was performed from 150 kHz to 30 MHz. The 10 highest peaks for each line are indeed all between 25 and 30 MHz. Below 20 MHz the level of the emissions rolls off dramatically such that the level of the emissions from 150 kHz to 10 MHz are approximately 25 dB below those listed in the table

Since there was one instance of the QP level being above the AVG limit, the report has been edited to both sets of data for the QP and AVG measurements

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ATCB 8) Given that the device may accept an AC adapter or POE power, the AC line conducted emissions should be checked to determine which method of supplying power is worse case. Only one set of data appears to be provided. Please provide further information regarding whether both modes of providing power were checked to ensure the worse case results are provided.

Airespace: When the device is powered from POE, it is receiving its power from an Airespace Ethernet switch. The Ethernet switch is rack mount device that has been tested and found to comply with FCC Class A requirements. The AC line conducted emissions DUE TO THE RADIO are indeed higher when the device is powered on the AC adapter than when the radio is powered by the Ethernet switch..
At some frequencies, the levels of the AC line conducted emissions are higher out of the Ethernet switch, however the levels of these emissions do not change noticeably with the connection (powering) of radio devices to the switch, therefore the AC line conducted emissions measured for the switch are due to the switch itself, and not the connection of radio(s).
Connecting a radio to the AC adapter does change the level of AC emissions out of the adapter, therefore, these emissions are due to the presence of a radio. These are the results presented in the report.

ATCB 9) Please provide a justification for the device as a Class A device.

Airespace: A document justifying the device as "Class A" has been uploaded to the ATCB site

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ATCB 10) Please call to discuss the bandedge measurements.

Airespace: Will Do!