



April 25, 2005

To: Dennis Ward
American Telecommunications Certification Body Inc.

From : Leon Kogan
JMR Electronics Inc.

Applicant : Strix Systems Inc.
FCC ID: RFM-ACCESS-ONE-03

Dear Mr. Ward:

Below you will find the information that was requested in your letter on April 20, 2005. All items concur with the numbered questions in your letter.

1. FYI- no action needed
2. Corrected confidentiality request letter is uploaded to ATCB website.
3. Operational Description is uploaded to ATCB website
4. The MPE calculations for the Strix Systems OWS3600 were done for each operating band using the highest gain antenna for the worst case situation.
For the 2.4GHz band the highest gain antenna is a 120 degree 16.4dBi sectored antenna and for the 5GHz bands the worst case would be the 29dBi parabolic antenna. In a standard sectored solution with 120 degree spacing between antennas, there will generally be a small amount of overlap at the 120 degree -3dB point of the antenna. In this situation, the maximum EIRP is down by 3dB and the sum of the two antenna patterns will produce no more than the maximum EIRP of a single antenna. For the 29dBi parabolic, in the 5GHz bands, the beamwidth is very narrow and any overlap of emissions would be at levels significantly below the -3dB point. Thus the maximum EIRP case is still for a single channel of 802.11a when a person is directly in the beam at 2 meters.
However, this does not address the situation of a person being presented with the emissions of an 2.4GHz antenna and a 5GHz antenna which is possible in any 802.11a/b/g device. For this situation the person would be exposed to 0.035mW/cm² plus 0.2mW/cm² for a maximum exposure of 0.235mW/cm². This is still well below the 1mW/cm² limit. The above calculations are provided by Strix Systems.
- 5 This is a typo. Please see identical information in section 5.1 (part 3) of the Report and photos. The EUT was under transmission/receiving condition continuously at specific channel frequency for both 801.11/A and /B/G. Channels 1,6,11, 149,157,165, w/ all antenna were used during the conductive emissions tests. Please see pages 19-23 of the Revised Test Report. The revised part 1Rev.02 of the Test report is uploaded to ATCB web.
6. The PPSD were re-measured as you suggested. Please see new Plots in revised section 4.5 of the Part 2. This revised section also is uploaded to ATCB web
7. FYI- no action needed
8. The following formula is used to convert the equipment isotropic radiated power (EIRP) to Field Strength $P_{dbm} = E_{dbuv/m} - 95.27 \dots (1)$
For power = -27 dbm/MHz and using RBW of 1MHz, then the Equivalent field strength by substituting in (1) will be 68.3 dbuv/m
For the average measurements, limit is 20 db less which is 48.3 dbuv/m

9. The Strix Systems, OWS3600 complies with 47CFR15.247C(2) in the following manner:
15.247C.2.i
The Strix Systems OWS3600 has three independent channels of 802.11a and three independent channels of 802.11b/g. Each independent channel (i.e., transmitter) is associated with only one directional antenna and thus do not employ multiple directional beams per transmitter.
15.247C.2.iv
The Strix Systems OWS3600 has three independent channels of 802.11a and three independent channels of 802.11b/g. Each independent channel (i.e., transmitter) is associated with only one directional antenna. Pursuant to 15.247C.2.iv transmitters that emit a single directional beam shall operate under the provisions of paragraph C(1) of this section. The OWS3600 is compliant with 15.247C.1 as follows:
Pursuant to C.1.i, in the 2400 to 2483.5MHz band our device utilizes a maximum gain antenna of 16.4 dBi, the maximum conducted output power allowed is +30dBm. Reducing the maximum conducted output power by 1dB for every 3dB over 6dBi yields $(16.4\text{dBi} - 6\text{dBi})/3\text{dB} = 3.5\text{ dB}$ reduction in maximum output power from 30dBm or a maximum 26.5dBm. Page 69 of the test report clearly shows our maximum output power for 11CCK modulation (worst case) is 26.11dBm which is below the limit.
Pursuant to C.1.ii, in the 5725 to 5850MHz band devices operating in a fixed point to point application with directional antennas with gain greater than 6dBi may do so without any reduction in transmitter conducted power.
10. Pursuant to 47CFR15.407.b.2 devices operating in the 5.25-5.35GHz band shall have an EIRP outside of the 5.15-5.35GHz band below -27dBm/MHz. Referring to the spectrum analyzer plots that follow for Channel 52, Channel 64 and Turbo Channel 58, out of the 5.15-5.35GHz band emissions were below -42dBm/MHz in all cases when the device was operating at full power. Per the Strix Systems Field Installation manual (page 8) the output power is to be reduced by the installation professional through the software interface. Using this guidance and the prior measured emission values the following are the maximum EIRP band edge emissions, for all antenna types:
For 12dBi Omni, Out of band EIRP= -42dBm/MHz + 12dBi - 6dB (power reduction in software) or an EIRP of -36dBm/MHz
For 23dBi Panel, Out of band EIRP= -42dBm/MHz + 23dBi - 20dB(i.e., 0dBm output power) or an EIRP of -39dBm/MHz
For 29dBi Parabolic, Out of band EIRP= -42dBm/MHz + 29dBi - 20dB(i.e., 0dBm output power) or an EIRP of -33dBm/MHz
Please see also Append Report with spectrum analyzer plots uploaded to ATCB web

Sincerely,



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