



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

August 5, 2004

RE: Cirronet

FCC ID: HSW2410M or HSW-2410M

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

**Administrative Issues:**

- 1) It does not appear that any applications under FCC ID HSW2410M exist. It appears that this may be for FCC ID HSW-2410M. Please confirm and if correct adjust the 731 form provided.
- 2) This device has a large number of past Permissive changes and antennas. Normally we would expect that the highest gain of each type of antenna approved should be checked. This agrees with Joe Dichoso's email on June 14, 2004 as well.

Following is a brief history of the approvals:

Original Application – 10/10/99 - Approve 7 antennas:

- |                     |        |
|---------------------|--------|
| 1) Dipole           | 2 dBi  |
| 2) Yagi             | 15 dBi |
| 3) Omni             | 6 dBi  |
| 4) Omni             | 12 dBi |
| 5) Corner Reflector | 14 dBi |
| 6) Patch            | 7 dBi  |
| 7) Patch            | 3 dBi  |

1<sup>st</sup> PC application – 3/29/01 – Add 5 Antennas

- |                       |         |
|-----------------------|---------|
| 1) Vehicle Mount Stub | 2.5 dBi |
| 2) Corner Reflector   | 9 dBi   |
| 3) Whip               | 5 dBi   |
| 4) Dish               | 24 dBi  |
| 5) Dish               | 18 dBi  |

2<sup>nd</sup> PC application - 1/28/02 - Add 2 antennas from different manufacture

- |                        |       |
|------------------------|-------|
| 1) Mobile Vehicle Whip | 5 dBi |
| 2) Omni                | 9 dBi |

3<sup>rd</sup> PC application -10/7/02 - Add 1 antenna

- |                  |          |
|------------------|----------|
| 1) Panel Antenna | 11.1 dBi |
|------------------|----------|

4<sup>th</sup> PC application – 11/1/02 – Add 1 antenna

- |          |        |
|----------|--------|
| 1) Patch | 12 dBi |
|----------|--------|

5<sup>th</sup> PC application - 11/14/02 – Add 1 antenna

- |          |       |
|----------|-------|
| 1) Patch | 6 dBi |
|----------|-------|

6<sup>th</sup> PC application – 10/30/03 - change of antenna connector

Antennas tested or of lesser gain/same type and covered by this application are give in blue. However there are a few antenna which do not appear to be covered by this application which are highlighted in red. If all antenna are not covered, please provide an explanation. Note that if all

antennas are not being covered, a clarification from Joe Dichoso may be necessary on how to handle this application. Are these other antennas highlighted in Red to be offered any more?

- 3) The test report should be signed by the appropriate responsible party overseeing or responsible for all tests per NVLAP requirements (separate from test technician). Please correct.
- 4) Was the dipole tested with 2 different cable lengths per the test diagram? Please confirm.
- 5) The test equipment list appears to incorrectly report the horn antenna. Additionally, what was used for measurements from 200 MHz to 1 GHz. Additionally was a preamp used > 1 GHz?
- 6) Page 23 mentions previously approved antennas. Which antennas are being approved now.
- 7) Page 28 appears to mention a 12 dBi Omni which is not covered by this application. Please explain.
- 8) It appears from the test data that only the 2<sup>nd</sup> harmonic was checked for radiated. It is expected that a sweep be performed to check further up the spectrum up to 10 times the fundamental. Was this done?
- 9) For radiated bandedge, what are the final radiated results (peak & average) for these measurements. Note you need only present worse case from the data provided.
- 10) Please provide power measurements that show the maximum power of this device is within +/- 0.5 dB of the previously reported 50 mW. This can not simply be assumed from the original application. Note that also the RF exposure exhibit should be adjusted for this fact.
- 11) Please note that the FCC no longer desires that the safe distance for mobile devices be calculated in the RF exposure exhibit for mobile applications (< 20 cm to user distances), but instead prefers the power density results to be calculated at 20 cm and compared to the power density limit. Please correct.
- 12) The last paragraph of the RF exposure appears to mention a 26 cm distance. It appears this should be 20 cm. Please review.



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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.