Helen Zhao

Subject: FW: ??: RE: ??: RE: ??: RE: ??: FW: D-Link Corporation, FCC ID: KA22002090027-1, Assessment NO.: AN04T4386, Notice#1

DWL-2700AP TSup revised 1222.p...

-----Original Message-----
From: ting@ccsemc.com.tw [mailto:ting@ccsemc.com.tw]On Behalf Of application@ccsemc.com.tw
Sent: Thusday, December 30, 2004 5:45 PM
To: Helen Zhao
Cc: application@ccsemc.com.tw; Mike Kuo
Subject: D-Link Corporation, FCC ID: KA22002090027-1, Assessment NO.: AN04T4386, Notice#1

Dear Helen,

Please see below

Best Regards,
Ting

From: Compliance Certification Services [mailto:hzhao@ccsemc.com]
Sent: Mon 12/13/2004 11:01 PM
To: Helen Zhao
Subject: D-Link Corporation, FCC ID: KA22002090027-1, Assessment NO.: AN04T4386, Notice#1

Question #1: Since 802.11b/g AP has higher power output than 802.11a mini-PCI card, the 802.11b/g AP will be considered as dominant transmitter. In this case, co-location test must be fully investigated in this filing. However the test report shows colocation test at restrict bandedge was not performed. Please provide additional test data.
Ans.#1: The spurious emission test data recorded in the test report has included co-location test with the 802.11a module upto 26GHz that including the restricted band and results are all under the limit. And separate bandedge test for 802.11b/g modes have been tested that all shown the test are complied. Due to these two points,we think that they are enough to approve the compliance.

==> Please provide restrict bandedge test plots for co-location.
Ans. Tested and please refer to attached for bandedge test data.

Question #2: There are totally three types of antenna will be used with the AP: 5dBi monopole antenna, 16 dBi panel antenna, and 4.5 omni-antenna. But the radiated emission colocation test was done with 5dBi monopole antenna and 16 dBi panel antenna only. Please explain why 4.5 omni-antenna could be exempted from the investigation.
Ans #2: Firstly, we would like to clarify one thing that this time they

alternate a 4.5dual band omni antenna and power adapter for class II change. The 5dBi monopole antenna was filed at the original grant. So, why co-location test didn't include 5dBi monopole antenna is because in future, this AP may only co-locate with 802.11a module when they market with the antenna 4.5 dBi dual band omniantenna and 16dBi panel antenna.
Besides, we have modified the test report regarding the antenna again in page 46 ~ 52 and page 67 ~ 73 as attached revised test report.

==> Please note since 5dBi monopole antenna was a certified antenna to be used with AP under FCC ID:KA22002090027-1, if you donot want to perform colocation test with 5dBi monopole antenna, then the grant condition will limit the device can colocate with 802.11a card only when 4.5 dBi dual band omniantennas or 16dBi panel antennas are
used.

Please also note for the same reason, FCC ID:KA22002090027-1 will have the similar grant conditiion to limit the device can be colocated with AP only when 4.5 dBi dual band omni antennas or 16dBi panel antennas are used.
Ans.: Understood and have informed client.

Question #3: The internal photos failed to show how the 802.11a mini-PCI card module (FCC ID: RRK2004090192-1) was colocated with the AP. Please provide more internal photos.
Ans #3: The internal photo has show the 802.11a mini-PCI card module (FCC ID: RRK2004090192-1) was colocated with the AP.

Question #4: Updated User manual was not found in the filing. Please note user manual needs to be updated to include RF exposure statement when the device is colocated with 802.11a mini-PCI card module (FCC ID: RRK2004090192-1).
Ans #4: Please refer to the attached for user manual.

==> First you need to indicate only two types of antenna are allowed when the device is co-located with
FCC ID: RRK2004090192-1.
Secondly, when 802.11a card is co-located, please add regulatory statement such as 5.15-5.25 indoor
use only into the user manual.
Ans.: Added and please refer to the last page of revised user manual.

Question #5: The page 3 of test report shows wrong test date, which does not agree with the test date indicated with individule test item. Please revise the test report.
Ans #5: Please refer to the attached for revised test report.
(See attached file: DWL-2700AP User manual.pdf)(See attached file: DWL-2700AP IntPho revised 1214.pdf)(See attached file: DWL-2700AP TestRpt revised 1214.pdf)

New question: Question #6: Setup photos of colocation test show when two high gain panel antennas were used, two panel antennas were actually not placed at the same plane: one was perpendicular to the other one, which prevented the receiver antenna from receiving the maximum signals from two antennas. The test results thus does not acurately reflect the real situation. Please also note when two omni antennas were used, same problem exists. Please explain.

Ans: According to the test procedure, the turntable shall be rotated for 360 degrees to determine the position of maximum emission level, so though the EUT antennas are set prependicular to one another, the max signal still can be measured by the receiving antenna.

==>Your receiving antenna might be able to get the maximum emission level from one panel antenna when it was facing toward the receiveing antenna, but it definately could not get the maximum emission level from the other panel antenna since the other panel antenna was perpendicular to the receiving antenna at that time, vice verse. So your receiving antenna never caught the maximum emission level from both antennas due to this placement, which makes your measurement inaccurate. Please reconsider this situation.

New question: Question #7: Setup photos of colocation test show when two omni antenna were used, they are not in the same direction (here I am not talking about z plane), actually two antennas are in two different planes that one is perpendicular to the other. Is this specially designed? What for?

Ans. There is no special design for the antennas. We double check with Engineering department and know that the two antennas are omni type and have same characteristics at different direction (parallel or perpendicular). Besides, two antennas' position will become perpendicular to one another is because the design of screw. After screwed on, they then become perpendicular.

New question: Question #8: The 5dBi omni antenna used with 802.11a MiniPCI card can operate in 5150-5350 MHz band, please note 5150-5250 MHz band is stricted for indoor use only. Please explain how an outdoor AP to be continue work ourdoor when this 802.11a module card (FCC ID: RRK2004090192-1) with 5dBi antenna is colocated.

Ans. When co-located with AP, 5150-5250MHz will be disable by software by placing on the market.

New question: Question #9: Please submit FCC ID label format when the AP is co-located with 802.11a MiniPCI card (FCC ID: RRK2004090192-1).
Ans: See attached FCC ID label format.

Best Regards,
Helen Zhao

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of the original e-mail date may result in application dismissal and forfeiture of the filing fee. 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 e-mail address listed below the name of the sender.