Helen Zhao

Subject: FW: answer: TCB questions: Trango Systems, Inc., FCC ID: NCYP5010M, DTS & UNII

P5010M Block Diagram(revised).... 05U3296-1 FCC DTS class II cha... 05U3296-2 FCC UNII class II ch... Antenna Spec.(correct).pdf Internal Photos.pdf

From: Claire Hoque
Sent: Tuesday, April 26, 2005 4:26 PM
To: Helen Zhao
Cc: Yan Zheng; Julia Luke
Subject: answer: TCB questions: Trango Systems, Inc., FCC ID: NCYP5010M,
DTS & UNII

Hi Helen,

Here are the answers.

Question #1: Antenna specification indicates that the highest dish antenna gain is
37.9dBi, the test report shows test was done with external antenna with 32.5dBi gain
(including cable loss). Please verify whether 37.9dBi in the spec does or does not include
cable loss, if not, please provide the cable loss. Please make sure that highest gain
antenna in each antenna type has been investigated.
<client>We only use up to the 4 foot antenna which is 34.5 dB - With a 2 dB loss cable
        the net gain is 32.5 dBi. Higher gain antennas are not allowed with this product.
        Correct antenna spec. is attached.

Question #2: The user manual (page 2) indicated three external Dish antennas with 27dBi,
30dBi, and 34dBi gain can be used. This does not agree with either 37.9dBi in spec or
32.5dBi in the report. Please explain. Please make sure that highest gain antenna in each
antenna type has been investigated.
<client>The user manual was referring to the 34.5 dB Radiowaves antenna and the two
        other members of that antenna family. The number 34 was used for simplicity.
        It clearly states in the manual what the allowed antennas are.

Question #3: The user manual (page 38) refers to Radiowaves models: SPD4-5.2, SPD3-5.2,
SPD2-5.2, SPD1-5.2 as certified antennas that can be used with Atlas5010-EXT. However the
antenna spec provided in this filing is for 5.8 GHz only: SPD4-5.8, SPD3-5.8, SPD2-5.8,
SPD1-5.8. Please provide antenna spec of SPD4-5.2, SPD3-5.2, SPD2-5.2, SPD1-5.2.
<client>pls see attached correct antenna spec.

Question #4: The user manual increases max power output for 5.8GHz band from original
20dBm to 21 dBm, however, on class II change grant, operation frequency range as well as
maximum power output will remain the same, even though the real measurement increased a
little bit, from 20.37dBm to 20.72dBm. Any updates on the max power output are not
suggested. You may keep the original figure to agree with the grant.
<client>On page 14, Trango has the following
        statement just to take care of this concern.

"Also note that the power setting used in the radio may differ slightly from the FCC
tested power output since the FCC measurement technique is slightly different than the
technique used in the factory. For link budget purposes, use the numbers provided by
Trango."

1

Question #5: The test report section 5.2 CLASS II PERMISSIVE CHANGE DESCRIPTION said "The new 8 dB attenuator is switched in for operation in the 5.2 GHz band", however, the block diagram shows 10dB pad is used in 5.2 GHz band". Please verify and update the report if necessary.
<answer>10dB is a typo on the block diagram - the pad is 8 dB,block diagram is revised.

Question #6: The original grant lists 5735-5840MHz as operation frequencies, but this class II change test report indicates high channel is 5835MHz, the user manual page 37 channel of Operation also list 5835MHz as the hightest channel. Please note a change of operation frequency triggers a new certification. Class II permissive change is not allowed. Please double confirm the high channel. The user manual If necessary, please file a new application under a different FCC ID.
<answer>The channel setting is software-controlled, no hardware changes are involved.

Quesiton #7: Please provide exhibits of external photos and internal photos.
<answer>There is no change of external photos, so here we just provided internal photos.

Question #8: This is for your information. There are two changes in this filing, #1 modification applies to both -INT and -EXT models, #2 adding antenna applies to -EXT only. However the test report was generated for -EXT model only, which may not be appropriate, you may need to update the test report.
<answer>Additional test for INT model was performed, pls see the revised reports which include
        both INT model and EXT model.

Thanks,

Claire