

RE: 3e Technologies International Inc.  
FCC ID: QVT-WLAN-MP2

Dear Tim,  
Here are our answers,

1) Please justify mobile use only. One of the Operational Description documents mentions installation in a laptop. Additionally, given items below, it appears this may be approved for mobile and fixed operation. Please explain.

**ANS:** This module is restricted to mobile configuration, all mention of laptop use has been deleted . Also the Operational Description has been changed as below:

The module is designed for mobile use only, which with antenna model **4010 & HG5822G**.

The antenna model 4010 of module should be installed and operated with minimum distance 20cm between the radiator and all persons. The other antenna model HG5822G of module should be installed and operated with minimum distance 40cm between the radiator and all persons.

2) Please define the minimum length cable tested and approved for use with each antenna.

**ANS:** We have added the following description in page 4 of test report .

The cable between WLAN adapter and antenna 1 is 480cm in length .

The cable between WLAN adapter and antenna 2 is 330cm in length .

3) The connections for this device appear to be standard N connectors. Please explain compliance to 15.203.

**ANS:** We have added some description in caution of users manual as below:

**Marketing**

The device cannot be sold retail, to the general public or by mail order. It must be sold to dealers or have strict marketing control.

**Requires professional installation;**

FCC Regulations require that the FCC ID : QVT-WLAN-MP2 be professionally installed by an installer certified by the National Association of Radio and Telecommunications Engineers or equivalent institution.

4) The device specifies 40 cm distance for the dish antenna. It is recommended that the manual be adjusted to cite 20 cm for the one antenna, and 40 cm fixed installation for the other. We will then issue the grant under mobile and fixed conditions, depending on the antenna used.

**ANS:** It has been corrected.

5) It appears that only one antenna is used for each band. What stops the end user from using the incorrect antenna in each band. Is there special firmware in place. Unless there are special firmware options in place it is difficult to see how this will be controlled, especially given that this is being done as a modular approval. Following is an excerpt regarding recent cognitive radio information which explains the FCC's perspective on this:

**ANS: According to the declaration of applicant, the way of "stopping the end user from using the incorrect antenna in each band" relies on 3eTI professional engineer installation and specified firmware. Is it sufficient to explain and comply the requirements of standard?**

6) The users manual clearly shows installation of the device into a laptop computer. It appears the manual is not correct given the current application. Please provide a users manual considered appropriate for this approval.

**ANS: All mention of laptop use in user manual have been deleted .**

7) Please clearly define whether you desire the 5745 – 5805 MHz frequencies to be certified under 15.247 as DTS or 15.407 as UNII. The report appears to mention both. However specific methods from the UNII test procedures should be referenced (i.e. method 1, 2, 3 as appropriate) from the attached document. Please explain and correct the test report as necessary.

**ANS: We have changed the measure method to follow 15.247. Please refer to the updated report.**

8) Power measurements for 5 GHz do not appear to meet the methods specified in the FCC's guidance notes. I.E. RBW and VBW do not match requirements and it appears the detector may have been incorrect as well. Note that retesting may affect results reported in MPE and 731 forms as well.

**ANS: We used Option 1 with Peak Power Meter HP8990A(RBW=150MHz,according to Bill, William H. Graff)**

9) Spectral Density measurements for 5 GHz do not appear to explain which methods was utilized. However method appears to be method 1. However plots show different detectors used that the test procedure. Please review and update the report as necessary.

**ANS: We have changed the measure method to follow 15.247. Please refer to the updated report.**

10) Peak Excursion measurements for 5 GHz do not appear to explain which methods was utilized.

Please review and update the report as necessary.

**ANS: We have changed the measure method to follow 15.247. It does not need to test this item.**

11) Table 4.5.4 shows failing test data. Please review.

**ANS: It has been corrected.**

12) Sections 4.5.5 (5 pages) appears to show some data as average only. Compliance to peak limits must also be shown. No information has been provided in order to show peak to average ratio for some readings.

**ANS: We have changed the format of radiated emission test data. Please refer to the updated report.**

13) Section 4.6.3 uses a correction factor of only 7.1 dB, while the antenna is 22 dBi gain. It appears the readings have not been appropriately corrected for antenna gain. Please review and correct as necessary. However it appears that a high correction to meet the -17 and -17 dBm limitation may create a problem. This is one reason many manufacturers approve their 5 GHz high channels under 15.247 instead since 15.247 only requires 20 dB down since band edges do not fall at restricted bands. Please review/explain and correct the report as necessary.

**ANS: Thanks for your guidance. We changed measure method to follow 15.247, and updated report. 15.247 is really relatively suitable for this product.**

14) Radiated bandage measurements for 5 GHz appear to be done as peak and average. Please note that this should be measured using the same measurement parameters at the power (RBW, VBW, detectors, etc.). This does not appear to be done to this method. This will likely yield different results. Please review/correct as necessary.

**ANS: We changed measure method to follow 15.247, and updated report.**

15) Please explain why the data for Page 31 for normal and turbo channels is identical and doesn't necessary match the plots.. Please correct as necessary.

**ANS: It has been corrected.**

16) For power measurements under 15.247 (802.11 b and g), please define which power measurement was used under the new DTS guidance document.

**ANS: We used Option 1 with Peak Power Meter HP8990A(RBW=150MHz)**

17) Sections 5.4.5 (3 pages) appears to show some data as average only. Compliance to peak limits must also be shown. No information has been provided in order to show peak to average ratio for some readings.

**ANS: We have changed the format of radiated emission test data. Please refer to the updated report.**

18) Several sections mention both 15.247 and 15.407, but results only appear to be given for one band. All notes referencing another section of the rules not applied should

**ANS: You are right. We will be more careful to our reports. All notes referencing 15.407 have been deleted in this report.**

19) FYI.....The users manual appears weak in providing all necessary information to the integrator. It would be suggested that the users manual also contain further detailed information that the integrator is responsible for given this is a modular approval. I am providing a sample page that contains much of this information, but please note that wording may need to be adjusted as appropriate for this device.

**ANS: This information has been written into users manual (page 3)**

Please review

Thanks

Daphne Liu