

American TCB

December 4, 2008

RE: FCC ID: E5MDS-MERCURY900 IC UPN:3738A-MERCURY9

Attention: Timothy R. Johnson

Please find our responses to your comments on this application below:

1) The changes appear to be more extensive than just the Digital Board. The PC letter cites that no changes have been made to the RF section since the original approval. However in comparison, the RF section does appear to be changed. In addition there appear to be changes throughout the device. Please explain.

The pictures shown are for the initial Mercury900 approval, the multi PCB stacked design. MDS changed the design to integrate the multiple PCB's onto one PCB and call this version the "HMR design". This HMR single PCB design was evaluated by Elliott labs, all emissions were better than the initial Mercury testing, so this was filed as a FCC Class 1 change where we did not have to file with the FCC. Also note the pictures supplied reflect the difference in the 2 PCB's, the filter highlighted is the receiver SAW filter, it was changed from a Through Hole part to a Surface Mount Topology, this receiver filter does not affect the transmit emissions.

2) Additionally, there is an additional radio integrated into this device that does not appear to be addressed in the original application or any Permissive change. This WLAN is not mentioned in any earlier application, or the PC letter. Despite this radio being modularly approved - It does not appear this is covered by the application. While the EMC may be handled through its original approval, RF exposure does not appear to be addressed. For instance nothing appears to preclude the 2 transmitters from operating at the same time. Therefore RF exposure must be considered in at least one application (E5MDS-MERCURY900 or VRA-SG9011028). Note the approvals mention no-colocation and therefore co-located applications must be evaluated. Note this may also affect RF safety distance given in the users manual and any RF exposure exhibits to provide – or may affect additional installation instructions.

These 2 transmitters will have the antenna's mounted more than 21cm apart, the primary 900MHz Mercury transmitter uses a omni or yagi antenna. The internal SAGRAD 2.4GHz radio module uses a small omni mounted more than 21cm apart from the fundamental 900MHz transmitter. Thus co-located rules really do not apply. We have updated the user manual to instruct the installer not to install antennas within 20 cm of each other.

3) Co-located module mentioned, VRA-SG9011028 does not currently appear to be approved on the FCC site. Please review.

At the time we made the application, it was not granted. It is granted by FCC now.

4) Please provide photographs of the label of the co-located module.

We have uploaded the file "SAGRAD FCC Photos" to internal photographs

5) Please provide new label exhibits that show labeling for both with and without the co-located VRASG9011028 TX.

We have uploaded a label file "Mercury Max labels.pdf".

6) Please confirm that the TX has been evaluated to ensure changes have not affected previously reported results.

Elliott labs has full compliance test reports that support the HMR topology changes are FCC/IC compliant.

7) FYI....Please note that applicant is responsible to ensure that co-located TX spurious emissions are still in compliance if radios can indeed transmit at the same time, although this data is not required to be submitted.

The WIFI module from SAGRAD operates in the 2.4GHz IMS band and only is capable of <100mw ERP. Yes the 1 watt Mercury transmitter and the <100mw WIFI module transmitter can transmit at the same time, however please see #2 above for co-location.

8) The RSS-102 attestation does not appear to be filled out completely (i.e. duty cycle, distance, etc.). Additionally, it is uncertain if this includes both TX's as given above.

It won't have both TX's as there is no collocation. I've updated the form. It's calculated, so there is no measurement distance.

9) This application is also for IC Reassessment. However the WLAN module does not appear to have an IC approval. Please review/explain.

We're still waiting for an IC approval for the WLAN module. Please proceed with the FCC Filing

Regards,

A handwritten signature in blue ink that reads "David Guidotti". The signature is written in a cursive style and is positioned above the printed name and title.

David Guidotti
Senior Technical Writer