

To: Sushant Kadimdivan, Timco Engineering, Inc.  
[sushant@timcoengr.com](mailto:sushant@timcoengr.com)

From: Jyun-Cheng Chen  
[JC.Chen@fcc.gov](mailto:JC.Chen@fcc.gov)

Re: FCC ID: QC8-RDL3000RMF

Applicant: Redline Communications Inc.

Correspondence Reference Number: 43700

Form 731 Confirmation Number: EA143802

Date of Original E-mail: 04/17/2013

A preliminary review of the application identified a few issues requiring your clarifications or corrective actions.

1. 608-614 MHz is not part of the Part 15H TVBD frequency band and should be excluded from Form 731 listing per KDB 634817.

We are submitting a modified 731 form. As we cannot update the information we filled in while submitting the application, we request that you update the information on the 731 form on your end to match the modified 731 form we have uploaded.

2. Channels 36 and 38 appear to be also disallowed at the device level according to the Product Manual. In that case, those frequencies should be excluded on Form 731 as well.

We are submitting a modified 731 form that will fix this. As we cannot update the information we filled in while submitting the application, we request that you update the information on the 731 form on your end to match the modified 731 form we have uploaded.

3. External photo cannot be designated as permanent confidential per KDB 726920. Inclusion of internal photos in the exhibit is not a valid justification. You are suggested to supersede the current external photo exhibit and submit a non-confidential version. Test setup photos on the last page do show the existence of a complete enclosure. Short-term confidentiality (with justification) is acceptable for external photos.

Per FCC Publication No. 726920, we submitted a KDB inquiry with a justification letter and NDA requesting that the internal and external photos be allowed to be held permanently confidential. Our inquiry tracking number was 325543 and we were granted permission. Based on this, I ask that you mark the EXTERNAL PHOTOS permanently confidential as I cannot do that from my end. Thank. We have also uploaded additional external photos for typical host / enclosure attached

4. Since the module's FCC ID would not be visible after it is installed, the OEM manual must provide instruction on FCC ID labeling in addition to label wording. All applicable labeling requirements as specified in Part 2.925 should be met. The current statements in Section 2.3 of the Product Manual could mislead the final product producers to think the sample label is the only requirement. Please re-phrase.

The revised user manual updated with additional information has been uploaded.

5. Section 2.2 of the Product Manual implies that the country of use would be selectable. Please provide details on available options, how one country is selected and when does this selection take place.

Operation of the final product requires a software 'key' that is available exclusively from Redline or its authorized agents.

The software key is unique to each module and must be installed and activated before the radio will operate.

The key contains sufficient security features that the professional installer and operator can not decode, modify, substitute, or otherwise circumvent the operational restrictions imposed by the 'key'.

The software 'key' limits the transmit power, operating frequency range, and channel bandwidth per the regulator domain governing the location where the radio will be deployed. The operator does not have the option to select the country or regulatory region of operation.

Additional information included in the revised user manual

6. There is one EMC report with a blank file name (file size 709662 bytes). Please review and replace the file.

The missing exhibit has been uploaded.

7. Please clarify the function of the two SMA antenna connectors (in addition to the two N-type) shown in the external photos.

These are MCX / TNC connectors for the GPS receiver module when installed. One connector is for GPS antenna and the other for the synchronization when multiple base sectors are co-located.

8. The application appears to have the intent that the same module FCC ID will be used by both the master implementation and the client implementation. Please provide detail on how the master/client configuration or setting is done as well as when this divergence takes place (at design, during production, or in the field and by whom). You are advised to consult KDB 594280 on FCC policy concerning programmability of certificated devices.

The mode of the radio is provided by options keys which define the behavior of the radio. The radio is non-functional until the key is loaded and in case of TVWS control, the radio serial number must be pre-registered with the WSDB and the WSDB must be reachable before network initialization begins.

The software 'key' limits the mode of operation as a master or client. The client mode is 'passive listener' and while in this mode the module can not initiate any transmission without first receiving and decoding a valid authorization message from the master. A module with a key for client operation can not be changed by the installer or user to enable master mode operation. A module with a key for master operation can operate in master or client (passive) mode.

9. With the modular approach and the uncertainty on antenna gain and height in the final product, the Product Manual needs to provide better instructions. For a modular application, per FCC policy as outlined in KDB 996369, the manual's audience is the final product manufacturers (instead of the installers). Clear and specific instructions should be provided in areas including ID label, antenna constraints, transmit power constraints, final product configurability, and RF exposure safety to ensure continual compliance. The module grantee is a responsible party when the label of the final product says "Contain FCC ID". Please revise the manual.

Per Issue #6 above, please update test reports before the technical review can resume. In the meantime, we are also reviewing our policies regarding modular and dual master/client authorization.

Please refer to the revised user manual.