

5. REGULATORY APPROVAL

5.1. FCC Regulatory Approval

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with parts 22/24/27/90 of the FCC Rules.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Installation/Integration

This above identified radio module is not intended to be provided to end-users but is for installation by OEM integrators only.

Sequans's module integration guidelines must be closely followed.

Compliance of host integrations of the module is limited to hosts adaptation designs which are identical to Sequans' reference design.

Host integrations with adaption designs deviating from Sequans' reference design require either filing a Class 2 Permissive Change to this modular approval or separate approval for the end-Product under its own FCC ID.

Host integrations with co-located (simultaneously operating) radio transmitters must be evaluated in accordance with FCC multi-transmitter rules and may require either filing a Class 2 Permissive Change to this modular approval or separate approval for the end-Product under its own FCC ID. Dependent on the result of the evaluation.

An inquiry to the FCC or a TCB is urgently recommended.

Antennas

This radio transmitter has been tested and approved by the FCC to operate with the antennae listed below:

- Aaronia AG OmniLOG® 90200 – max antenna gain = 2 dBi
- Fractus Antennas TRIO mXTEND™ (FR01-S4-210) – max antenna gain = 2.4 dBi

To comply with both the FCC maximum EIRP limits and with RF Exposure rules, the maximum antenna gain for the operation bands are:

- Band 2 (1900 PCS): 8.0 dBi
- Band 4 (AWS-1): 5.0 dBi
- Band 5 (850): 9.4 dBi
- Band 12 (700a): 8.6 dBi
- Band 13 (700c): 9.1 dBi
- Band 17 (700b): 8.7 dBi
- Band 25 (1900+): 8.0 dBi
- Band 26 (850+): 9.4 dBi
- Band 66 (AWS-3): 5.0 dBi
- Band 106 (LMR): 9.77 dBi

The use of an antenna having a gain greater than the above indicated in any of those specified band is strictly prohibited.

RF exposure safety

This module complies with the FCC RF exposure limits and has been evaluated in compliance with mobile exposure conditions.

The equipment must be installed and operated with minimum distance of 20 cm of the human body.

End-product RF exposure safety

Integrations of this module into end-products which are intended for portable use, i.e. less than 20 cm distance between its radiating structures (antenna) and the body of nearby persons, or which otherwise put additional technical requirements, like Hearing Aid compatibility, require either filing a Class 2 Permissive Change to this modular approval or separate approval for the end-Product under its own FCC ID.

Compliance with FCC rule part 15B

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

End-product compliance FCC rule part 15B (Unwanted Emission Limits for Digital Device)

If the OEM of the end-product fully complies with the above described reference design, they can inherit and rest on the existing modular approval for RF compliance.

The OEM remains still responsible to show compliance of the overall end-product with the FCC limits for unwanted conducted and radiated emissions from the digital device (unintentional radio) portion of such end-product (commonly addressed as part 15B compliance or similar).

End-product Labelling

The module's FCC ID must either be visible from the exterior of the end-product (e.g. per window) or per electronic display, or shall be displayed on an additional exterior label per the following or similar string:

Contains FCC ID: 2AAGMGM02SA

The end-product must display the following user notice on its exterior acc. to part 15.19 (the notice may be printed in the manual in case the host is too small):

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Further labelling requirements may apply depending on the FCC rule parts relevant to the end-product.