

## Adrián Gallardo Alcázar

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**De:** oetech@fcc.gov  
**Enviado el:** miércoles, 12 de junio de 2024 21:50  
**Para:** DEKRA Spain - RCB Admin SP  
**Asunto:** Response to Inquiry to FCC (Tracking Number 469189) (TCB)

**Importancia:** Alta

**Inquiry on 01/22/2024 :**

**Inquiry:**

Dear Sirs,

We hereby  
request approval for the following original equipment application, which has  
already been submitted:

FCC ID:  
2AD9Q-X4F103

Confirmation  
Number: TC693540

We submit  
the present PAG because the module under certification has no shield. The  
module consists of a PCB board with mounted components on one side and the  
antenna on the other side. The module will be soldered onto a host PCB with antenna  
facing up and components facing down.

According  
to the user manual (that we attach), the section 4.5 provides integrations  
instructions for the host integrators explaining how to integrate the module  
into the host to achieve RF shielding for the circuitry on the module.

In case  
that integration of this module on a host is not properly done, the user manual  
provides instructions that the host manufacturers shall do (section 5.1.6):

1. - Host device manufacturers must test their own device according to the same rules as this module and whichever ones additionally applicable (aside from testing other radio interfaces, or other testing simultaneous transmission, or other potentially necessary testing).

2. - Host manufacturers must follow some of the alternative options described below to associate their host to the module such as filing a Class 2 Permissive Change (C2PC) to the module, filing a Change FCC ID and then a C2PC, or pursuing full certification for their device including the UWB interface.

On grant comments, we put comments informing about what to do in case that integration of this module on a host is not properly done:

“The module relies on a generic host to provide shielding. As such, the host manufacturer must follow exactly the instruction guides to solder the module into the host, as specified on section 4.5 of the user manual.

In case that integration of this module on a host is not properly done, then:

.

Host device manufacturers must test their own device according to the same rules as this module and whichever ones additionally applicable (aside from testing other radio interfaces, or other testing simultaneous transmission, or other potentially necessary testing).

.

Host manufacturers must follow some of the alternative options described below to associate their host to the module such as filing a Class 2 Permissive Change (C2PC) to the module, filing a Change FCC ID and then a C2PC, or pursuing full certification for their device including the UWB interface. “

Could you please give us a confirmation that the approach is correct?

Best regards.

**FCC response on 02/08/2024**

This is confusing Are you stating that since there is no permanent shield, the shielding is based upon how it is soldered to the host board?

---Reply from Customer on 02/09/2024---

Dear sirs,

Regardingto your question “Are you stating that since there is no permanent shield, theshielding is based upon how it is soldered to the host board?”:

Yes, the moduleconsists of a PCB board with mounted components on one side (without shielding)and the antenna on the other side. The module will be soldered onto a host PCBwith antenna facing up and components facing down.

For thisproject, our client contacted you on 03/15/2023 through a KDB inquiry (622827) regardingto this matter. The inquiry is shown next:

“The modulewill be soldered onto a host PCB with antenna facing up and components facingdown. Please, find enclosed the X4F103 Shielding statement letter where the manufacturereexplain how complete shielding of the module is achieved by.

Please,could you confirm if you are agree that "full" modular approval isvalid?”

The FCCresponse was:

“Becausethe module will depend on a host for shielding, certification will be Limited.Please see 15.212(b) and KDBs 996369 with particular attention to D03”.

You canfind attached the communication between our client and the FCC through the KDBinquiry 622827, in a letter format. The question related to the shielding isthe question number two.

We alsoattach the X4F103 Shielding statement letter, that our client talks about onthe inquiry. On this document, you can check the explanation of the manufacturerabout how to complete shielding.

Don’thesitate to contact us.

**FCC response on 02/09/2024**

To what FCC UWB rule part is this to be certified? Please be specific.

---Reply from Customer on 02/14/2024---

Dear sirs,

For thisdevice (with FCC ID: 2AD9Q-X4F103), the PAG according to the UWB rule part wascarried out with the PAG number 141398. On that PAG 141398, there was solved allthe questions related to UWB part and also LMA matters. On 02/09/2024, the FCCreplied on that PAG that we can proceed with the grant. We attach the e-mailwith all the replies between FCC and TCB according to PAG number 141398.

So, could you please confirm that the present PAG number 469189 is ok and we can consider it as closed, taking into account that all the UWB part was carried out on the PAG number 141398 ?.

Thank you in advance and best regards.

### **FCC response on 02/21/2024**

On 2/9/2024, you were asked the question:  
To what FCC UWB rule part is this to be certified? Please be specific.

Concerning this specific application, you never answered the question.

You referenced another PAG number 141398. Now where this PAG may be supportive, if you are asked a direct question concerning an application under PAG review, you need to answer it. We should not have to research other PAGs for an answer.

---Reply from Customer on 02/22/2024---

Dear sirs,

We are sorry for not answering your question. We answer it below:

This UWB device is seeking to be certified under 15.519 (hand held UWB systems) and 15.521 (all UWB devices).

Please don't hesitate to contact us for any additional question.

Best regards.

---Reply from Customer on 02/29/2024---

Dear Sirs,

Could you please inform us if you have any news about this PAG?

Don't hesitate to contact us with any question.  
Best regards.

### **FCC response on 03/04/2024**

FCC – Letter – Modular approval – v2

There are issues with the Modular Cover Letter. In this letter, it does not explain why certain items which are limited are limited.

The letter needs to stand on its own as an exhibit. The person reading the letter should not have to cross reference other documents.

Point (i) Please refer to attached document Technical specifications 3 – Shielding

.....This references a document which has permanent confidentiality. Anyone accessing this from the FCC ID Search would not be able to access this document. The explanation should be here. (And it appears simple.) The RF Components aren't shielded.

Point (vi) Please refer to the communications with the FCC and additional documents related to packaging and the user manual.

.....No. Again, the explanation should be simple and should be on the letter.

FCC – reply about full modular approval and marking of the device.

.....It is strongly advised not to make FCC correspondences through the inquiry system public. In that correspondence contains all the information necessary to re-open that inquiry.

Where precisely can the test plan be found?

---Reply from Customer on 03/06/2024---

Dear Sirs,

We attach anew version of the modular approval letter called “FCC - Letter - Modularapproval - v3” with all the issues solved. Could you please verify if it is ok?

About thetest plan, we explain below:

In the FCCregulatory notices section within the User manual, Novelda actually lists allthe conditions related to limited modular approval and provides the referencesfor this. In the User manual is explicitly indicated how the integrator mustcompletely follow the integration instructions as well as to performverification testing to ensure that the host device, when the module isworking, is in compliance with Part 15 F (Ultra-Wideband Operation).

In the usermanual (section 5.1.6, page 14) is explicitly indicted that in case thatintegration of this module on a host is not properly done, and/or the useconditions of the host device are not the same as recognized in the FCC Grantof the module then:

1. Hostdevice manufacturers must test their own device according to the same rules asthis module and whichever ones additionally applicable (aside from testingother radio interfaces, or other testing simultaneous transmission, or other potentiallynecessary testing).
2. Hostmanufacturers must follow some of the alternative options described below toassociate their host to the module such as filing a Class 2 Permissive Change(C2PC) to the module, filing a Change FCC ID and then a C2PC, or pursuing fullcertification for their device including the UWB interface.

We also attach the user manual.

Could youplease confirm if it is ok for certification?

Thank youin advance and best regards.

### **FCC response on 03/08/2024**

Modular Approval Letter

There are still issues with this letter.

About Point (i)

It is actually the ground plane of the PCB of the host device, on which this module is soldered, the one providing the appropriate shielding as the modules' components face down the PCB, and the module's antenna, the back, faces up. ....Again, you don't have to go into detail as to how to overcome the lack of one of the Modular Approval items. In fact, a ground plane on the board that the module is soldered to is not a substitute for a shield.

It is fine if the integration instructions recommend a ground plane be used for the installation.

About Point (vi)

We submitted an Inquiry, 622827.

.....Again, this is a public document No one reading this is going to know what Inquiry 622827 is about.

User Manual

It appears that the only mention of continued compliance is:

Moreover, approval has been granted as Limited Modular not associated with a specific host.

To leverage on the FCC grant, additional testing on the host is required to ensure it's in compliance with the same FCC rules as the module Article 15.519 and 15.521.

Where does it mention that there needs to be a Class II Permissive Change in order to add a host specific condition?

Where does it mention what tests are to be performed? If it is the recommendation of the module manufacturer to have all tests performed, that is okay It just has to state that.

Additionally, new revisions should also be uploaded to the EAS and the old ones superseded.

---Reply from Customer on 03/12/2024---

Dear Sirs,

Please find our answer below.

About point(i), we submit a new version of the modular approval letter with name "FCC -Letter - Modular approval - v4". Could you please check if it is ok?

Regarding to your comment "It is fine if the integration instructions recommend a ground plane be used for the installation.". We would like to inform you that the user manual states on sections 4.4, 4.5 and 4.6 (pages 10 and 11) the instructions for the ground plane to be used for the installation.

About point (vi), regarding to your comment "Again, this is a public document No one reading this is going to know what Inquiry 622827 is about". Could you please check the new version of the modular approval letter "FCC -Letter - Modular approval - v4", and inform to us if it is ok?

About the user manual, regarding to your comment "Where does it mention that there needs to be a Class II Permissive Change in order to add a host specific condition?", we would like to inform you that on section 5.1.6 (page 14), you can find the following paragraph informing about the needs to submit a Class II Permissive Change:

"2. Host manufacturers must follow some of the alternative options described below to associate their host to the module such as filing a Class 2 Permissive Change (C2PC) to the module, filing a Change FCC ID and then a C2PC, or pursuing full certification for their device including the UWB interface".

About the user manual, regarding to your comment "Where does it mention what tests are to be performed? If it is the recommendation of the module manufacturer to have all tests performed, that is okay It just has to state that". We would like to inform you that on section 5.1.6 (page 14), you can find the following paragraph informing about the testing to be performed, which are all the testing according to the same rules as this module:

"1. Host device manufacturers must test their own device according to the same rules as this module, 15.519 and 15.521 as mentioned above, and whichever ones additionally applicable (aside from testing other radio interfaces, or other testing simultaneous transmission, or other potentially necessary testing)".

We submit a new version of the user manual, called "UM\_v2".

Old versions of the documents are superseded, as you requested.

Don't hesitate to contact us.

Best regards.

---Reply from Customer on 03/18/2024---

Dear sirs,

We kindly ask, do you have any news about the status of this PAG?

If you have any question, don't hesitate to contact us.

Best regards.

---Reply from Customer on 03/22/2024---

Dear sirs,

We kindly ask again, do you have any news about this matter?

Could we consider closed and proceed?

If you have any question, don't hesitate to contact us.

#### **FCC response on 03/22/2024**

UM\_v2

Is page 14 of 18 the only place where a test plan to show continued compliance in a host can be found?

---Reply from Customer on 03/25/2024---

Hello,

Indeed.

The whole section 5.1.6 is Novelda's instructions for the integrators. In that section, the implications of limited modular approval, how and what exactly is the approval of the module and how they can ensure compliance of the host devices are laid out.

We look forward to your response.

---Reply from Customer on 04/01/2024---

Hello,

Please, we kindly ask you again.

We look forward to your response.

Could we consider closed and proceed?

If you have any question, don't hesitate to contact us.

We look forward to your response.

---Reply from Customer on 04/04/2024---

Dear FCC,

We ask you please for feedback to be able to complete this certification.

We received your latest comment on March 22nd and since then we've replied and tried to get to an ending.

Please, we look forward to your response.

---Reply from Customer on 04/09/2024---

Dear sirs,

We kindly ask you for some further feedback.

Do you have any news about the status of this PAG?

If you have any question, don't hesitate to contact us.

Best regards.

#### **FCC response on 04/19/2024**

UM\_v2

So this is confusing. The recommended test plan for continued compliance once integrated into a host and filed as a Class II Permissive Change should be very prominent. (Please see FCC TCB Workshop Presentation Review of TCB PAG Submissions - April 2024.)

In the UM\_v2 Page 14, there is a statement which says:

To leverage on the FCC grant, additional testing on the host is required to ensure it's in compliance with the same FCC rules as the module Article 15.519 and 15.521.

As such, we request to the manufacturers of host devices to submit test data and the host design to Novelda, to verify compliance with the integration instructions and a similar performance to the testing of the module itself.

.....What exactly does this mean? Is it the responsibility of the final host integrator to submit a test plan to Novelda?

---Reply from Customer on 05/08/2024---

Dear Sirs,

The host integrator don't have the responsibility to submit a test plan to Novelda. We are sorry for the confusion.

In order to solve the misunderstanding, the client has update the user manual (we attach it. It is called "UM\_v3"). On the new version of the user manual, you can check that the section 5.1.6 (page 13) shows the required test plan for host manufacturers.

Please don't hesitate to contact us.



Best regards.

---Reply from Customer on 05/29/2024---

Dear sirs,

Did you have the chance to review our last reply from 05/08/2024?

Please don't hesitate to contact us if you have any doubt.

Best regards.

---Reply from Customer on 06/05/2024---

Hello,

Could you please come back to us with feedback?

The Manufacturer of this module is still without an FCC grant waiting for this PAG to be closed.

Thanks,

---Reply from Customer on 06/12/2024---

Hello,

Please we need an answer to this request.

Could you let us know if something else is needed that the Manufacturer of this module must include or change in their User manual ?

As far as we can assess, the information is properly described for the integrators in such a way that they're very well informed of the conditions of the testing, the test plan to follow for the host device and the requirements for leveraging the FCC ID of this module.

Thanks in advance.

#### **FCC response on 06/12/2024**

The item subject to PAG has been reviewed. The TCB may proceed with the grant of the application pending its review of all non-PAG items.

#### **Attachment Details:**

[KDB inquiry 622827](#)

[PAG UWB15F\\_141398](#)

[FCC - Letter - Modular approval - v3](#)

Do not reply to this message. Please select the [Reply to an Inquiry Response](#) link from the OET Inquiry System to add any additional information pertaining to this inquiry.