

Request for Additional Information for EMC Certification

Company:	Telit Communications (AT4)	Composite Device:	Yes: No: No
MT#:	81201	FCC Direct Filing:	Yes: No: X
		Permit But Ask:	Yes: No: X
FCC ID:	RI7WE865D	FCC Rule Part:	15.247
UPN:	5131A-WE865D	RSS Standard:	RSS-210
FRN:		Class II PC/Reassessment:	Yes: No: X

October 15, 2008

Dear Sara,

Thank you for your application. In order for us to process your approval, the following must be addressed. Please provide a response in a timely manner to avoid delays or dismissals.

Technical Review:

- ➤ The Output power state that it is an average value when peak is required for DTS devices operating under this rule part.
- > The conducted band edge plots submitted are required to meet the 20dBc requirement in a 100KHz RBW.
- ➤ The radiated plots submitted are not sufficient to demonstrate compliance with the 15.205 restricted bands immediately removed from 2.4GHz ISM band.
- ➤ The applicant name, Telit Communications S.P.A, has no corresponding FRN listed with the FCC. Please confirm.

If you have any questions or concerns, please contact us.

Thank you!

Jennifer Sanchez TCB Administrator MET Laboratories, Inc. tcbinfo@metlabs.com www.metlabs.com

Admin Review By: Jennifer Sanchez Technical Review By: Shawn McMillen

Please note that partial responses increase processing time and should not be submitted. The items indicated above must be provided before processing can continue on the above referenced application. Failure to provide the requested information in a timely manner may result in application dismissal.

TCBJ FORM-13 EMC	4/23/2008
Issued by: TCB Administrator	4/23/2008

Jenn Warnell

From: Sara González López [sgonzalez@at4wireless.com]

Sent: Friday, October 17, 2008 6:30 AM

To: Jennifer Sanchez
Cc: Jenn Warnell

Subject: RE: 81201 AT4 Wireless - Request for Technical Information

Importance: High

Attachments: RT 15 Oct 2008.pdf; Freq Hopper Guidelines.PDF; Direct Sequence Measurment Notes.pdf;

RE: 81201 AT4 Wireless - Request for Technical Information

Hello.

1. Regarding the output power, in point 15.247 (b) (3) it is specified:

"For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode".

In test report 28057RET.101 page 15 it is clearly indicated that this permitted alternative method to a peak power measurement was used, so we believed the measurement is correct.

2. Regarding the conducted band edge plots, it is specified in point 15.247 (d):

"If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB".

In test report 28057RET.101 pages 22, 23 and 24 it is shown in the plots that we applied the limit of 30 dB. This is because the output conducted power was measured using RMS averaging over a time interval, as indicated previously.

The reason of use of a RBW different from 100 kHz is that as there is no measurement guideline for conducted band-edge compliance neither in point 15.247 nor in document "Appendix C Guidance on Measurement for Direct Sequence Spread Spectrum Systems" (see attached) we followed the document DA 00-705 released March 30, 2000 "Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems" (see attached) as we always did in previous accepted reports of part 15.247 which we submitted in the past. In such document it is indicated in "Section 15.247 (c) . Band-edge compliance of RF Conducted Emissions" the use of a RBW \geq 1% of the span.

3. Regarding compliance of radiated emissions in the 15.205 restricted bands, in test report 28057RET.101 pages 30, 31 and 43 it is clearly indicated that no spurious signals were found in such restricted bands, which were investigated searching for spurious signals. No plots of these bands were added besides the wide range plots we always included in previous accepted reports of part 15.247 which we submitted in the past. If you consider it is necessary to include such plots please confirm and we will include in future 15.247 test reports.

4. With regards to the FRN, please see attached e-mail already sent to you.

Please, tell me if this is enough or you require some more explanation.

Thanks a lot for your prompt reply.

Best regards,

Sara González

Worldwide Compliance Services

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Fax: +34 952 619 113

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De: Jennifer Sanchez [mailto:jsanchez@metlabs.com] **Enviado el:** jueves, 16 de octubre de 2008 0:19

Para: Sara González López

CC: Jenn Warnell; Jennifer Sanchez

Asunto: 81201 AT4 Wireless - Request for Technical Information

Importancia: Alta

Hi Sara,

During the technical review for Telit Communications, FCC ID: RI7WE865D/ IC: 5131A-WE865D, our reviewer came across a few concerns, please see attached correspondence.

If you have any questions or concerns, please let me know.



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		Permit But Ask:	Yes:	No:
FCC ID:	RI7WE865D	FCC Rule Part:	15.247	
UPN:	5131A-WE865D	RSS Standard:	RSS-210	
FRN:		Class II PC/Reassessment:	Yes:	No: 🛛

Dear Sara,

Thank you for your application. In order for us to process your approval, the following must be addressed. Please provide a response in a timely manner to avoid delays or dismissals.

Technical Review:

- ➤ In reference to the RF output power please follow the FCC DTS measurement guidance which is attached.
- ➤ In addition please follow the guidance provided. All conducted spurious emissions removed from the 2.4GHz band are required to be measured in a 100KHz resolution.
- ➤ Plots showing compliance with the restricted bands above and below the ISM band need to be provided to demonstrate compliance at the band edges. It is unclear with the plots submitted that compliance is met from 2310-2390MHz and 2483.5-2500MHz.

If you have any questions or concerns, please contact us.

Thank you!

Jennifer Warnell TCB Administrator MET Laboratories, Inc. tcbinfo@metlabs.com

www.metlabs.com

Admin Review By: Jennifer Sanchez Technical Review By: Shawn McMillen

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Issued by: TCB Administrator	4/23/2008

Jenn Warnell

From: Sara González López [sgonzalez@at4wireless.com]

Sent: Monday, October 27, 2008 4:14 PM

To: Jennifer Sanchez
Cc: Jenn Warnell

Subject: Addendum test report for FCC and IC grants for WE865-DUAL

Importance: High

Attachments: 28057RET201-addendumFCC.pdf; RSS-210 cross reference_WE865-DUAL.pdf; IC Annex B -

MPE calculations for the equipment WE865-DUAL.pdf; TCBJ_FORM-4_FCC_4-25-08[1] __WE865-DUAL.pdf; 28057RET101.pdf; Appendix B of the IC form__WE865-DUAL.jpg

Good evening Jennifer,

you can find attached the new addendum FCC test report for WE865-DUAL. I have also attached the test report 28057RET101.pdf

Also, you can find attached the updated version of the following documents, which are the ones affected by the results of this new test report. The rest of the application documents for FCC and IC are the ones you already have.

FCC:

new versions of:

RF Exposure information TCBJ_FORM FCC

IC:

new versions of:

RSS-210 Cross Reference Appendix B of the IC form IC Annex B - MPE calculations

Please, we kindly ask you to do all your best to get FCC and IC grants within 24 hours due to these special circumstances.

Thank you very much in advance for your great efforts.

Best regards,

Sara González

Worldwide Compliance Services

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Fax: +34 952 619 113

Web site: www.at4wireless.com - Skype: sara_gonzalez--malaga



Request for Additional Information for EMC Certification

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MT#:	81201	FCC Direct Filing:	Yes:	No: 🛛
		Permit But Ask:	Yes:	No: 🛛
FCC ID:	RI7WE865D	FCC Rule Part:	15.247	
UPN:	5131A-WE865D	RSS Standard:	RSS-210	
FRN:	0009643503	Class II PC/Reassessment:	Yes:	No: 🛛

October 28, 2008

Dear Sara,

Thank you for your application. In order for us to process your approval, the following must be addressed. Please provide a response in a timely manner to avoid delays or dismissals.

Technical Review:

- ➤ MPE calculations are based on the wrong max RF conducted power.
- The addendum MPE calculation is an EIRP calculation, not RF exposure calculation.
- There are no Line Conducted test setup photos. Please include the test setup photos.
- ➤ There is no 15.109 test data, procedures and test setup photos. Please include all the relevant 15B data for this filing.

If you have any questions or concerns, please contact us.

Thank you!

Jennifer Sanchez TCB Administrator MET Laboratories, Inc. tcbinfo@metlabs.com www.metlabs.com

Admin Review By: Jennifer Sanchez Technical Review By: Shawn McMillen

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TCBJ FORM-13 EMC	4/23/2008
Issued by: TCB Administrator	4/23/2008

Jennifer Sanchez

Jennifer Sanchez From:

Tuesday, October 28, 2008 9:47 AM Sent:

To: Shawn McMillen

Cc: Angela Kekovski; Jenn Warnell; Jennifer Sanchez

Subject: RE: Addendum test report for FCC and IC grants for WE865-DUAL

Importance: High

Attachments: IC Annex B - MPE calculations for the equipment WE865-DUAL.pdf; CERTIF.pdf; 28057aia.002.pdf;

28057aib.002.pdf; 28057REM.002.pdf; RF Exposure information WE865-DUAL Rev1.pdf

Hi Shawn.

Please see the revised MPE and 15B report with photos.

Thanks! Mrs. J. Sanchez TCB Administrator MET Laboratories (Santa Clara, CA) 408-207-4785 Direct 408-829-1603 Cell jsanchez@metlabs.com



Certifying the World, One Product at a Time

From: Shawn McMillen

Sent: Tuesday, October 28, 2008 8:43 AM

To: Jennifer Sanchez

Cc: Angela Kekovski; Jenn Warnell

Subject: RE: Addendum test report for FCC and IC grants for WE865-DUAL

RT 10-28-2008

- 1. The product is listed as a module however there is no modular approval check sheet/cover letter. If this is an application for modular approval please include module check sheet/cover letter.
- 2. MPE calculations are based on the wrong max RF conducted power
- 3. The addendum MPE calculation is an EIRP calculation, not RF exposure calculation.
- 4. There are no Line Conducted test setup photos. Please include the test setup photos.
- 5. There is no 15.109 test data, procedures and test setup photos. Please include all the relevant 15B data for this filing.

Regards,

Shawn McMillen

Wireless Manager **MET Laboratories, Inc.** 410-949-1914 (Direct) 410-310-9678 (Cell) www.metlabs.com