

**CENTRO DE TECNOLOGÍA DE
LAS COMUNICACIONES, S.A.**

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TEST REPORT

REFERENCE STANDARD: FCC Rules and Regulations 47 CFR Part 15, Subpart B

**FCC Rules and Regulations 47 CFR Part 15, Subpart B: Limits and methods of measurements
for radio frequency devices. Unintentional radiators.**

NIE..... : 28057REM.002

Approved by
(name / position & signature) : Rafael López
EMC Manager

Elaboration date : 2008-09-18



Identification of item tested : WE865-DUAL

Trademark : TELIT

Model and/or type reference : WE865-DUAL

Serial number : Prototype

Features : Power supply 3.8Vdc

Description : WE865-DUAL is a b/g WIFI 802.11 module.

Applicant : TELIT COMMUNICATION, S.P.A.

Address..... : Via Stazione di PROSECCO 5/B

P.C.: 34010

SGONICO - ITALY.

CIF/NIF/Passport : 03711600266

Contact person..... : Gian Marco Melosu / R&D Test Manager

Telephone / Fax..... : 0039 0 404 192 111 / 0039 0 404 192 237

e-mail: : Gianmarco.Melosu@telit.com

Test samples supplier		TELIT COMMUNICATION, S.P.A.
Address.....		Via Stazione di PROSECCO 5/B
		P.C.: 34010
		SGONICO - ITALY.
CIF/NIF/Passport		03711600266
Contact person:.....		Gian Marco Melosu / R&D Test Manager
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Manufacturer		TELIT COMMUNICATION, S.P.A.
Address.....		Via Stazione di PROSECCO 5/B
		P.C.: 34010
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CIF/NIF/Passport		03711600266
Telephone / Fax.....		0039 0 404 192 111 / 0039 0 404 192 237
Test method requested		
Standard		FCC Rules and Regulations 47 CFR Part 15
Test procedure:		
1.	PEEM001: Medida de la tensión perturbadora en bornes de alimentación según EN 55022.	
2.	PEEM002: Medida del campo perturbador radiado según EN 55022.	
Non-standardized test method		N/A
Report template No.		FDT08_09
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Competences and guarantees

This certificate of conformity was issued in accordance with the decision N° 3/2000 of the Joint Committee established under the Agreement on Mutual Recognition between the European Community and the United States of America. By this decision, AT4 wireless can act as Conformity Assessment Body (CAB) on Electromagnetic Compatibility. This Certificate applies to the samples listed at technical reports.

This laboratory is designed by the Federal Communications Commission (ES0004)

AT4 wireless is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, AT4 wireless has a calibration and maintenance programme for its measurement equipment.

AT4 wireless guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at AT4 wireless at the time of performance of the test.

AT4 wireless is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of AT4 wireless.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of AT4 wireless and the Accreditation Bodies.

Uncertainty

Uncertainty (factor $k=2$) was calculated according to the following AT4 wireless's internal documents:

1. PODT000: Procedimiento para el cálculo de incertidumbres de medida
2. FEM12_07: Formato de cálculo de incertidumbre a aplicar en la medida de la tensión perturbadora en bornes de alimentación según EN 55022.
3. FEM13_08: Formato de cálculo de incertidumbre a aplicar en la medida del campo perturbador radiado según EN 55022.
4. FET298_01: Formato de cálculo de incertidumbre a aplicar en la medida del campo perturbador radiado entre 1 y 25 GHz.

Usage of samples

Samples undergoing test have been selected by: TELIT COMMUNICATION, S.P.A.

Sample S/01 is composed of the following elements:

<u>Control N°</u>	<u>Description</u>	<u>Model</u>	<u>Serial N°</u>	<u>Date of reception</u>
28057/03	WE865-DUAL	WE865-DUAL	Prototype	2008-09-10

Sample S/22 is composed of the following elements:

<u>Control N°</u>	<u>Description</u>	<u>Model</u>	<u>Serial N°</u>	<u>Date of reception</u>
28057/05	WE865-DUAL	WE865-DUAL	Prototype	2008-09-10

The sample S/22 is a new WIFI module with a 2300µF capacitor added to the power supply input.

1. Samples S/01 and S/22 has undergone the next test(s):

1. Continuous conducted emission, power leads:

Standard: FCC Rules and Regulations 47 CFR Part 15

Method: FCC Rules and Regulations 47 CFR Part 15, Subpart B (Class B)

2. Radiated emission, electromagnetic field:

Standard: FCC Rules and Regulations 47 CFR Part 15

Method: FCC Rules and Regulations 47 CFR Part 15, Subpart B (Class B)

Testing period

The performed test started on 2008-09-10 and finished on 2008-09-11.

The tests have been performed at AT4 wireless.

Environmental conditions

Date	Temp. máx.	Temp. mín.	Hum. máx.	Hum. mín.	Pressure máx.	Pressure mín.	Límit
2008-09-10	19	19	47	47	1007	1007	15-30 °C
2008-09-11	22	22	50	50	1008	1008	

In the control chamber, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 20 % Max. = 80 %
Shielding effectiveness	> 100 dB
Electric insulation	> 10 k Ω
Reference resistance to earth	< 0,5 Ω

In the semianechoic chamber (21 meters x 11 meters x 8 meters), the following limits were not exceeded during the test.

Temperature	Min. = 15 °C Max. = 30 °C
Relative humidity	Min. = 45 % Max. = 60 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar
Shielding effectiveness	> 100 dB
Electric insulation	> 10 k Ω
Reference resistance to earth	< 0,5 Ω
Normal site attenuation (NSA)	< ± 4 dB at 10 m distance between item under test and receiver antenna, (30 MHz to 1000 MHz)
Field homogeneity	More than 75% of illuminated surface is between 0 and 6 dB (26 MHz to 1000 MHz).

In the chamber for conducted measurements, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 30 °C
Relative humidity	Min. = 45 % Max. = 60 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar
Shielding effectiveness	> 100 dB
Electric insulation	> 10 k Ω
Reference resistance to earth	< 0,5 Ω

Summary

Considering the results of the performed test according to standard EN 61000-6-3 (2007) & EN 61000-6-1 (2007), the items under test are **IN COMPLIANCE** with the requested specifications specified in the standard.

NOTE: The results presented in this Test Report apply only to the particular item under test established in page 1 of this document, as presented for test on the date(s) shown in section, "USAGE OF SAMPLES, TESTING PERIOD AND ENVIRONMENTAL CONDITIONS".

Remarks and comments

The tests have been realized by the technical personnel: Antonio Ruiz and José Carlos Luque.

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 150 kHz to 30 MHz is $I = \pm 3$ dB for quasi-peak measurements, $I = \pm 2,8$ dB for peak measurements ($k = 2$).

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 30 MHz to 1 GHz is $I = \pm 3,1$ dB for quasi-peak measurements, $I = \pm 2,9$ dB for peak measurements ($k = 2$) and from 1 to 12,75 GHz is $I = \pm 4,04$ dB for average measurements. And for average measurements from 1 to 12,75 GHz the uncertainty $I = \pm 4,04$ dB and from 12,75 GHz to 25 GHz is 4,21 dB.

Testing verdicts

Not applicable: NA

Pass.....: P

Fail: F

Not measured.....: NM