

Testing and certification of, consultancy and research concerning, electronic and electric appliances, systems, installations and telecommunication systems

Nederlands Meetinstituut

ADDENDUM 02 TO TEST REPORT OF A 2.4 GHz RADIOLAN PCMCIA CARD, BRAND BREEZECOM, TYPE PC-DS11, IN CONFORMITY WITH FCC PART 15

FCC report layout endorsed by the FCC by Public Notice of March 11, 1992.

Accredited by	:	STERLAB accreditation number L029
		D.A.R., TTI-P-G.127/96-00
Competent body	:	Article 10-2 EMC Directive
Notified body	:	Article 10-5 EMC Directive
		Low Voltage Directive
		Number 0122 TTE Directive
Designated laboratory	:	TTE Directive
Notified test service	:	Automotive Directive
FCC listed	:	31040/SIT
VCCI listed	:	R 592 and C 507
Certification body	:	Electrical Products Safety
-		Regulation Hong Kong

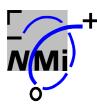
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Subsidiary companies: NMi Certin B.V. (27233418) NMi Van Swinden Laboratorium B.V. (27228703) NMi International B.V. (27239176)



FCC ID: LKT-PC-DS11 Description of EUT: 2.4 GHz RLAN PCMCIA card Manufacturer: No Wires Needed B.V. Brand mark: BreezeCOM Type: PC-DS11

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MEASUREMENT/TECHNICAL REPORT

BreezeCOM, Ltd.

Model: PC-DS11

FCC ID: LKT-PC-DS11

September 30, 1999

This report concerns (check or	ne):	Original grant	Class II change		
Equipment type: Direct Seque	Equipment type: Direct Sequence Spread Spectrum Transceiver				
Deferred grant requested per	47 CFR 0.457(d)(1)(ii)?	yes	no		
	If yes defer until:				
agrees to notify the Commiss	BreezeCOM, Ltd., Atidim Technology Park, Bldg 1, Tel Aviv 61131, Israel, agrees to notify the Commission by <u>(date)</u> of the intended date of announcement of the product so that the grant can be issued on that date				
Transition Rules Request per 15.37 yes no			no		
If no, assumed Part 15, Subpart B for unintentional radiators – the new 47 CFR (10-1-90 Edition) provision.					
Report prepared by:	Name Company name Address Telephone number Telefax number Mailing address City/Place/Postal cd. Country	: + 31-59450-48 04	E.E.		

The data taken for this test and report herein was done in accordance with FCC Part 15 and measurement Procedures of ANSI C63.4-1992 and were relevant the procedures as specified in the sheets from the FCC attached to this test report. NMi Certin B.V. at Niekerk, The Netherlands, certifies that the data is accurate and contains a true representation of the emission-profile of the Equipment Under Test (EUT) on the date of the test noted in the test report. I have reviewed the test report and find it to be an accurate description of the test(s) performed and the EUT so tested.

Date: September 30, 1999

Signature: A.J.M. Robbert epartment EVIC and relecommunication

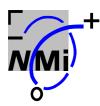
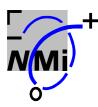


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1 Radiated emission data

The following data lists the significant emission frequencies (worst case), measured levels in accordance with FCC 15.209.

1.1 Radiated emissions above 1 GHz for PC-DS11 with integral antenna

Vertical polarization			
Frequency	Measured Value Peak (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	35.5	54.0	-18.5

Table 1.1: Peak radiated emissions above 1GHz on channel 6 of PC-DS11 (Vertical)

Vertical polarization			
Frequency	Measured Value Avg. (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	35.3	54.0	-18.7

Table 1.2: Average radiated emissions above 1GHz on channel 6 of PC-DS11 (Vertical)

Notes:

Polarization refers to measuring antenna, negative margin means it is below the limit. All radiated harmonic emissions were found to be > 25dB below limits.

The radiated emission measurement has been carried out with AC supply voltage of 120 V.

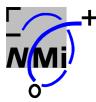
Test personnel:

Tester signature

Date: September 15, 1999

Typed/Printed name : Jan S. Sikkema

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Horizontal polarization			
Frequency	Measured Value Peak (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	37.7	54.0	-16.3

Table 1.3: Peak radiated emissions above 1GHz on channel 6 of PC-DS11 (Horizontal)

ŀ	Horizontal polarization			
Frequency	Measured Value Avg. (3m)	FCC limit	FCC margin	
MHz	dbuV/m	dbuV/m	dB	
2157.2	37.4	54.0	-16.6	

Table 1.4: Average radiated emissions above 1GHz on channel 6 of PC-DS11 (Horizontal)

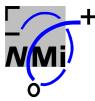
Notes:

Polarization refers to measuring antenna, negative margin means it is below the limit. All radiated harmonic emissions were found to be > 25dB below limits.

The radiated emission measurement has been carried out with AC supply voltage of 120 V.

Test personnel:

Tester signature : Date: September 15, 1999



1.2 Radiated emissions above 1GHz of PC-DS11 with external antenna

Vertical polarization			
Frequency	Measured Value Peak (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	35.8	54.0	-18.3

Table 1.5: Peak radiated emissions above 1GHz on channel 6 of PC-DS11 (Vertical)

Vertical polarization			
Frequency	Measured Value Avg. (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	35.5	54.0	-18.5

Table 1.6: Average radiated emissions above 1GHz on channel 6 of PC-DS11 (Vertical)

Notes:

Polarization refers to measuring antenna, negative margin means it is below the limit. All radiated harmonic emissions were found to be > 25dB below limits.

The radiated emission measurement has been carried out with AC supply voltage of 120 V.

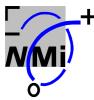
Test personnel:

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Horizontal polarization			
Frequency	Measured Value Peak (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	36.6	54.0	-17.4

Table 1.7: Peak radiated emissions above 1GHz on channel 6 of PC-DS11 (Horizontal)

Horizontal polarization			
Frequency	Measured Value Avg. (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	36.2	54.0	-17.8

Table 1.8: Average radiated emissions above 1GHz on channel 6 of PC-DS11 (Horizontal)

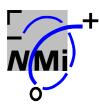
Notes:

Polarization refers to measuring antenna, negative margin means it is below the limit. All radiated harmonic emissions were found to be > 25dB below limits.

The radiated emission measurement has been carried out with AC supply voltage of 120 V.

Test personnel:

Tester signature : Date: September 15, 1999



2 Peak power

The peak power measurement was performed in accordance with FCC 15.247 (b). The plot is made with the highest bandwidth being worst case. The maximum value is then marked and the peak value of this signal is measured using a wideband diode detector.

Channel	Peak Power (dBm)
1	7.1
6	8.8
11	11.7

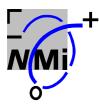
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Table 2.1: Peak Power

Test personnel:

Tester signature

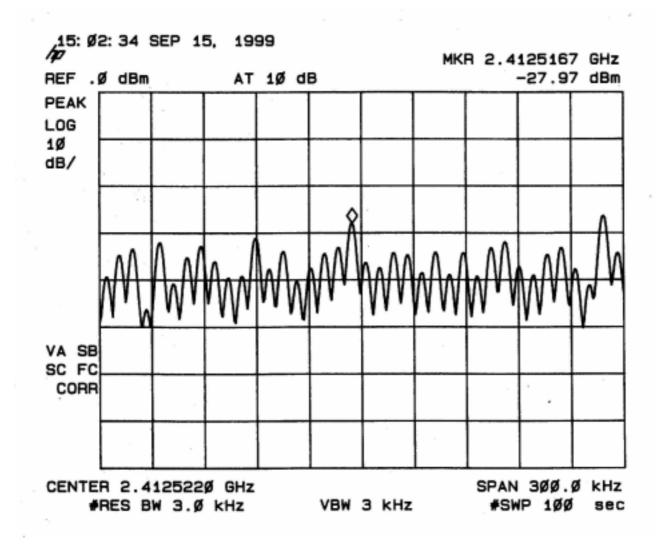
Date: September 15, 1999



3 Peak power density

The peak power measurement was performed in accordance with FCC 15.247 (d)

3.1 Channel 1



Plot 3.1: Peak Power Spectral Density plot of channel 1

Modulation = 5.5 Mbps

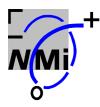
The peak power spectral density on channel 1 : -27.97 dBm.

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Test personnel:

Tester signature

Date: September 15, 1999

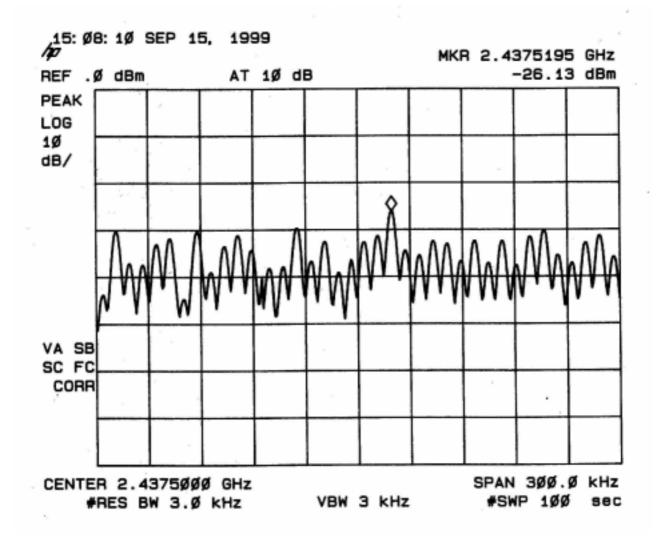


Type: PC-DS11

FCC ID: LKT-PC-DS11 Description of EUT: 2.4 GHz RLAN PCMCIA card Manufacturer: No Wires Needed B.V. Brand mark: BreezeCOM

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3.2 Channel 6



Plot 3.2: Peak Power Spectral Density plot of channel 6

Modulation = 5.5 Mbps

The peak power spectral density on channel 6 : -26.13 dBm.

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Test personnel:

Tester signature

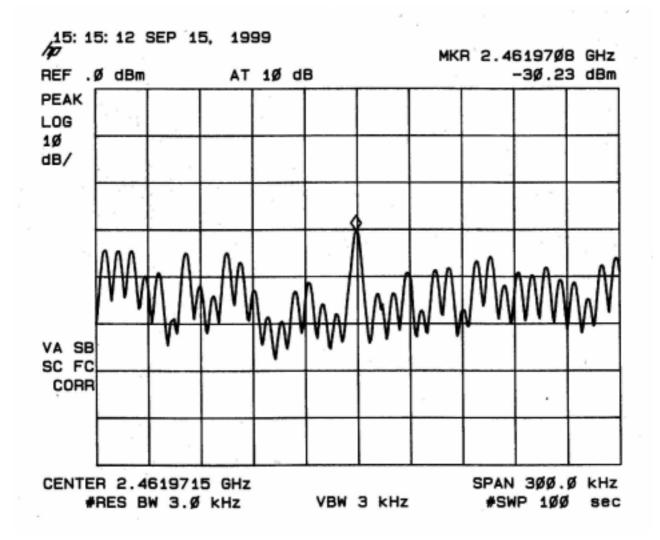
Date: September 15, 1999



Type: PC-DS11

FCC ID: LKT-PC-DS11 Description of EUT: 2.4 GHz RLAN PCMCIA card Manufacturer: No Wires Needed B.V. Brand mark: BreezeCOM

3.3 Channel 11



Plot 3.3: Peak Power Spectral Density plot of channel 11

Modulation = 5.5 Mbps

The peak power spectral density on channel 11 : -30.23 dBm.

2

Test personnel:

Tester signature

Date: September 15, 1999