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TEST REPORT

8551-PT-R0066-15

Date of issue: March 26th, 2015

Customer: Racom s r.o.
Mírová 1283
592 31 Nové Město na Moravě
Czech Republic

Manufacturer: Racom s r.o.
Mírová 1283
592 31 Nové Město na Moravě
Czech Republic

Subject of the test: Radio parameters

Kind of equipment: Radiomodem &Router

Type: RipEX-200

Serial number: 11844454

Test procedure (used standard): TIA-603-D (June 2010)

The results of the tests have been obtained following the procedures reported in this Report and are related only to the tested item, date, place and conditions of the test. Test Report does not substitute any other document that may be required by national authorities according to relevant regulations. These tests were carried out beyond the accreditation of Czech Metrology Institute - Testing laboratory TESTCOM Praha.
Measurement equipment, date and place of test, ambient and test conditions, results of testing and statements of compliance and other relevant information are written in the Annex 1 of this Test Report.

Tested by:

Pavel Hamouz

Český metrologický institut -85-

Head of the Department:

Marek Svoboda, Ph.D.

End of test report

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1. Technical Summary And Test Results

1.1 Technical Summary

Applicant:	**Racom s.r.o.** **Mírová 1283** **592 31 Nové Město na Moravě** **Czech Republic**
Manufacturer:	**Racom s.r.o.** **Mírová 1283** **592 31 Nové Město na Moravě** **Czech Republic**
Produced By:	**Racom s.r.o., Czech Republic**
Kind of Equipment:	**Radiomodem & Router**
Type Designation(s):	**RipEX-200**
RF Power:	**0.1 W to 10 W (in the range 216 MHz to 217 MHz)** **0.1 W to 2 W (in the range 217 MHz to 220 MHz)**
Alignment Range:	**216 MHz to 220 MHz**
Switching Range:	**4 MHz**
Number of Units:	**1**
Date of Receipt of Unit(s):	**18.3.2015**
Start of Test:	**23.3.2015**
Finish of Test:	**26.3.2015**

1.2 Test Results of Unit No. 1 Transceiver

Type Designation:	**RipEX-200**
Code:	**RipEX-215S**
Serial No.:	**11844454**
Channel Separation:	**6.25; 12.5; 25; 50 kHz**
Transmitter Part:	
CH 1	**216.025 MHz**
CH 2	**219.975 MHz**
Power Supply Range:	**Vnom = 24 V DC**
Temperature Range:	**Tnom = Ambient temperature**

Ambient temperature: (23 ± 1) °C Relative humidity: (21 ± 10) %

Transmitter operating unmodulated

The measurement was carried out at maximum power level

Clause 2.2.12: **TRANSMITTER UNWANTED EMISSIONS: RADIATED SPURIOUS**

SPURIOUS EMISSIONS					
CH 1 (RF Power = 10W)			CH 2 (RF Power = 2W)		
Freq. [MHz]	Bandwidth [kHz]	Level [dBm]	Freq. [MHz]	Bandwidth [kHz]	Level [dBm]
For all frequencies the spurious emissions were detected at least 20 dB below the limit.					
Measurement uncertainty		+4.4 dB/-4.5 dB			

Clause 3.2.12: **LIMIT** (47 CFR 90.210 Emission (b),(c),)(g),)(h) and (i) and 90.691)

FREQUENCY RANGE	30 MHz to 2.2 GHz (approx. 10^{th} harmonic)
RADIATED SPURIOUS EMISSIONS	$dB_c = 43 + 10 \log_{10} (P)$ where P = RF output power [W] or an equivalent absolute level of -13dBm (50 µW)

TEST EQUIPMENT USED: 036, 041, 053, 057, 062, 075, 127, 150, 151, 154

REMARKS: - -

Ambient temperature: (23 ± 1) °C

Relative humidity: (21 ± 10) %

Transmitter operating unmodulated

The measurement was carried out at minimum power level

Clause 2.2.12: **TRANSMITTER UNWANTED EMISSIONS: RADIATED SPURIOUS**

SPURIOUS EMISSIONS					
CH 1 (RF Power = 0.1W)			CH 2 (RF Power = 0.1W)		
Freq. [MHz]	Bandwidth [kHz]	Level [dBm]	Freq. [MHz]	Bandwidth [kHz]	Level [dBm]
For all frequencies the spurious emissions were detected at least 20 dB below the limit.					
Measurement uncertainty		+4.4 dB/-4.5 dB			

Clause 3.2.12: **LIMIT** (47 CFR 90.210 Emission (b),(c),)(g),)(h) and (i) and 90.691)

FREQUENCY RANGE	30 MHz to 2.2 GHz (approx. 10^{th} harmonic)
RADIATED SPURIOUS EMISSIONS	$dB_c = 43 + 10 \log_{10} (P)$ where P = RF output power [W] or an equivalent absolute level of -13dBm (50 µW)

TEST EQUIPMENT USED: 036, 041, 053, 057, 062, 075, 127, 150, 151, 154

REMARKS: - -

1.3 Summary of Test Results

P = Complied with the requirements of the specification for this test (used standard)
F = Not complied with the requirements of the specification for this test (used standard)
N/A = Not applicable

Unit No. 1

Clause of the standard: Parameter	**Result**
Clause 2.2.12: TRANSMITTER UNWANTED EMISSIONS: RADIATED SPURIOUS	P

2. Test Equipment

Lab Id. No.	Test equipment	Type	Manufacturer	Serial No.	Calibration Due Date
036	Preamplifier	87405A	Hewlett-Packard	3207A00368	18.9.2017
041	Anechoic Chamber	-	Frankonia	-	24.10.2015
053	Spectrum Analyzer	8595E	Hewlett-Packard	3726U00949	20.7.2015
057	Termination 50 Ohm/1 W	378NM	Narda	-	3.12.2016
062	Attenuator 20 dB/50 W	776B-20	Narda	-	21.5.2015
075	Thermometer - Hygrometer	C3120A	Comet System	-	13.1.2019
127	Power Supply	TSZ 75	ZPA	547 1255	16.9.2015
150	Biconical Broadband Antenna 30 - 300 MHz	VHBB 9124 + BA 9106	Schwarzbeck	0204/93	18.12.2016
151	Biconical Broadband Antenna 0.3 - 1 GHz	UBA 9116	Schwarzbeck	313/93	20.11.2015
154	Broadband Horn Antenna 0.8 - 4.5 GHz	BBHA 9120-A	Schwarzbeck	215	14.11.2015

3. Additional Information

There was carried out only measurement of the following parameter on the request of applicant:

Clause 2.2.12: Transmitter Unwanted Emissions: Radiated Spurious.

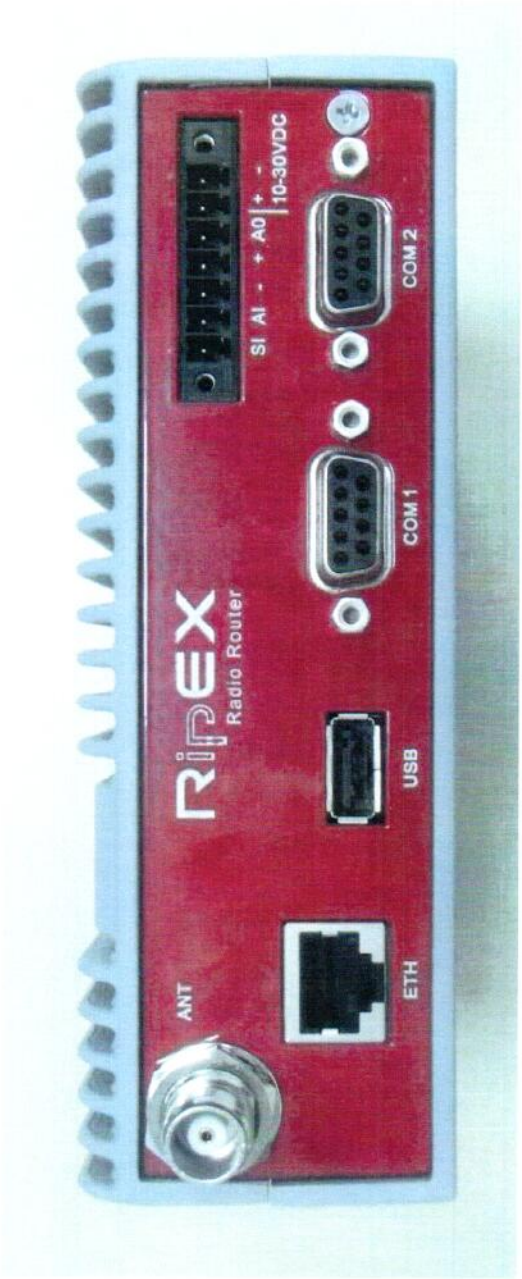
4. Photographs Of Equipment

List of photographs:

PHOTOGRAPH 1: Unit No. 1, overall front external view

PHOTOGRAPH 2: Unit No. 1, overall rear external view

PHOTOGRAPH 3: Unit No. 1, overall top external view



PHOTOGRAPH 4: Unit No. 1, Sample No. 1 detailed view of type label