Annex 1: Measurement diagrams to
T E S T R E P O R T
No.: 19-1-0117501T02-C2

According to:
FCC Regulations Title 47, Part 15
Subpart B (Unintentional radiators)
§15.107, §15.109

ISED-Regulations
ICES-003, Issue 6

for

R&M USA Inc.

R&MinteliPhy Netscale Kit 60 ports
RFID based network infrastructure monitoring system

FCC ID: 2AVF4R837014

Laboratory Accreditation and Listings
Accredited EMC-Test Laboratory
accredited according to DIN EN ISO/IEC 17025

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The test results relate only to the individual items which have been tested. This report shall not be reproduced in parts without the written approval of the testing laboratory © Copyright: All rights reserved by CETECOM

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1. Measurement diagrams of emission test

1.1. Diagrams of conducted emissions on AC-Power lines (Diagram group 01)

1.01_S01_15B

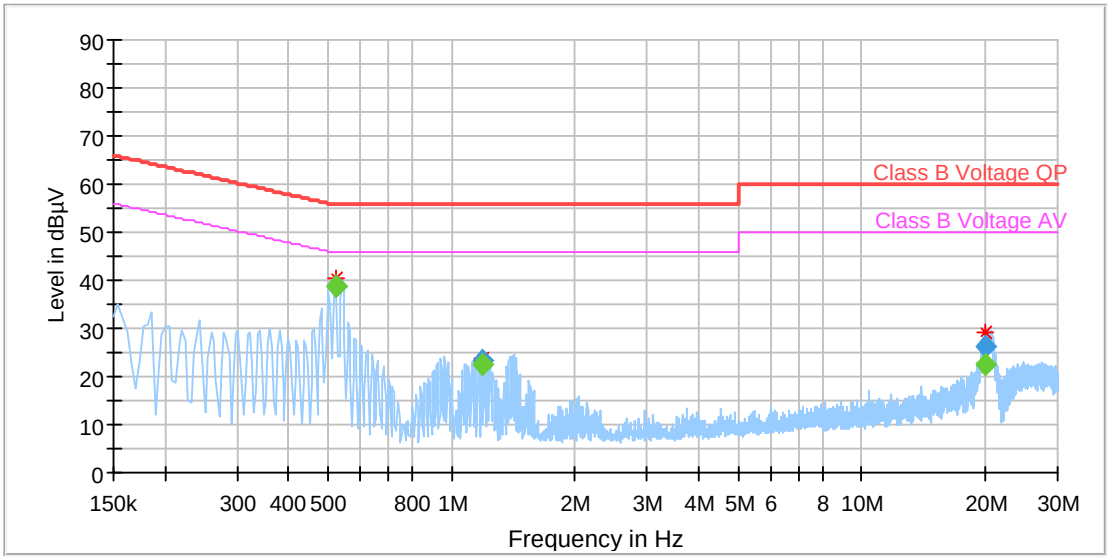
Common Information

Test Description:	Conducted Voltage Measurement Class B
Test Site Location:	Conducted Emission, CETECOM GmbH Essen
Test Software:	R&S EMC32 v9.15
Test Standard:	FCC 15.107 class B / ICES-003, Issue 6
Operating Mode:	Transceiver disabled. internal communication
Measured on line:	N/L1
Diagram details:	Shows the peak values as a sum of measured ports in maxhold mode
Environmental Conditions::	Humidity : 59%rH; Temperature: 22°C
Operator:	Mah
Comments:	
EUT Setup:	--
Verdict:	Passed
Comment:	

EUT Information

Manufacturer:	R&M USA Inc.
Product:	R&MinteliPhy Netscale Kit 60 ports
Model:	RFID based network infrastructure monitoring system
HW version:	Rev. A
SW version:	400C
Serial number:	1002021000007339
Power Supply:	120 V AC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	PE	Corr. (dB)
0.523125	38.92	---	56.00	17.08	1000.0	9.000	N	GND	0.1
0.523125	---	38.60	46.00	7.40	1000.0	9.000	N	GND	0.1
1.183750	23.21	---	56.00	32.79	1000.0	9.000	N	GND	0.3
1.183750	---	22.46	46.00	23.54	1000.0	9.000	N	GND	0.3
20.080625	---	22.41	50.00	27.59	1000.0	9.000	L1	GND	0.8
20.080625	26.12	---	60.00	33.88	1000.0	9.000	L1	GND	0.8

1.2. Diagrams of radiated field strength emissions, 30 MHz - 1 GHz (Diagram group 03)

3.01_RSE_TX_Standing

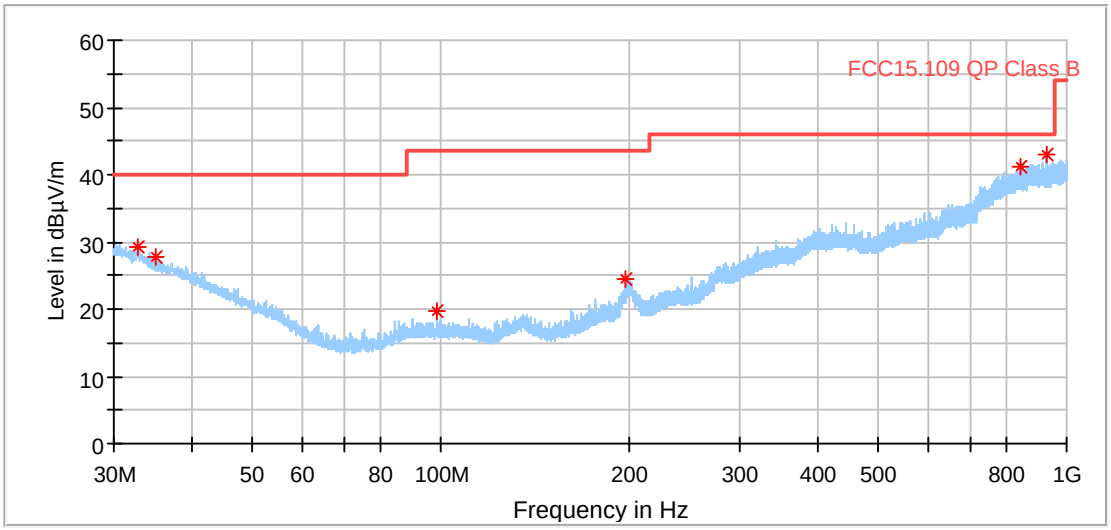
Common Information

Test Description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used Filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.109 Class B / ICES-003, Issue 6
Operator:	TFa
Operating Mode:	1
Environmental Conditions::	Humidity : 45%rH; Temperature: 21°C
Comments:	EUT Standing
Verdict:	Initial

EUT Information

Manufacturer:	R&M USA Inc.
Product:	R&MinteliPhy Netscale Kit 60 ports
Model:	RFID based network infrastructure monitoring system
HW version:	Rev. A
SW version:	400C
Serial number:	1002021000007339
Power Supply:	120 V AC

Full Spectrum



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin	Height	Pol	Azimuth	Corr. (dB)
32.720000	29.23	40.00	10.77	105.0	V	90.0	20.3
35.120000	27.83	40.00	12.17	105.0	H	270.0	19.2
98.280000	19.60	43.50	23.90	105.0	H	0.0	8.1
197.800000	24.55	43.50	18.95	182.0	H	270.0	11.4
841.840000	41.33	46.00	4.67	182.0	H	90.0	26.1
928.400000	42.85	46.00	3.15	182.0	V	90.0	27.0

3.02

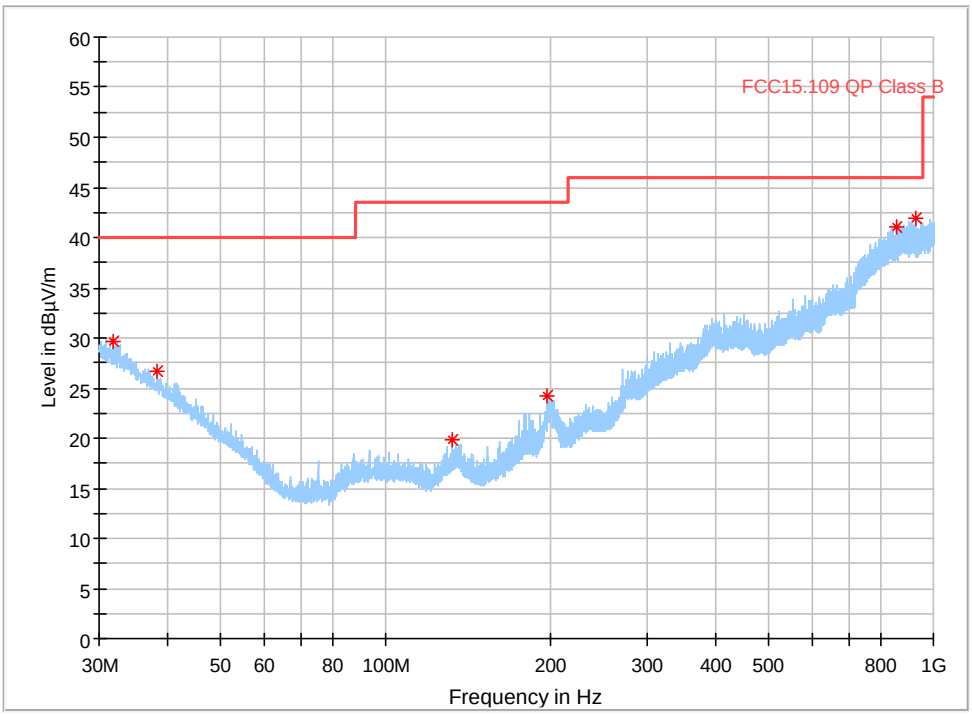
Common Information

Test Description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used Filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.109 Class B / ICES-003, Issue 6
Operator:	TFa
Operating Mode:	1
Environmental Conditions::	Humidity : 45%rH; Temperature: 22°C
Comments:	EUT Laying
Verdict:	Initial

EUT Information

Manufacturer:	R&M USA Inc.
Product:	R&MinteliPhy Netscale Kit 60 ports
Model:	RFID based network infrastructure monitoring system
HW version:	Rev. A
SW version:	400C
Serial number:	1002021000007339
Power Supply:	120 V AC

Full Spectrum



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin	Height	Pol	Azimuth	Corr. (dB)
31.800000	29.68	40.00	10.32	182.0	H	270.0	20.7
38.240000	26.66	40.00	13.34	182.0	V	180.0	17.9
132.600000	19.81	43.50	23.69	105.0	V	270.0	9.5
196.520000	24.19	43.50	19.31	105.0	H	90.0	11.5
855.880000	41.04	46.00	4.96	182.0	H	90.0	25.9
928.360000	41.92	46.00	4.08	182.0	V	0.0	27.0