

## TEST REPORT

Test report no.: 1-3415/11-01-21-A



### Testing laboratory

**CETECOM ICT Services GmbH**  
Untertuerkheimer Strasse 6 – 10  
66117 Saarbruecken / Germany  
Phone: + 49 681 5 98 - 0  
Fax: + 49 681 5 98 - 9075  
Internet: <http://www.cetecom.com>  
e-mail: [ict@cetecom.com](mailto:ict@cetecom.com)

#### Accredited Testing Laboratory:

The testing laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025 (2005) by the Deutsche Akkreditierungsstelle GmbH (DAkkS). The accreditation is valid for the scope of testing procedures as stated in the accreditation certificate with the registration number: D-PL-12076-01-01  
Area of Testing: Radio/Satellite Communications

### Applicant

**Bury GmbH & Co. KG**  
Robert-Koch-Str. 1-7  
32584 Löhne / GERMANY  
Phone: +49 5732 9706-0  
Fax: +49 5732 9706-209  
Contact: Christoph Koston  
e-mail: [koston@bury.com](mailto:koston@bury.com)  
Phone: +49 5732 9706-284

### Manufacturer

**Bury GmbH & Co. KG**  
Robert-Koch-Str. 1-7  
32584 Löhne / GERMANY

### Test standard/s

47 CFR Part 15	Title 47 of the Code of Federal Regulations; Chapter I Part 15 - Radio frequency devices
RSS - 210 Issue 8	Spectrum Management and Telecommunications - Radio Standards Specification Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment

For further applied test standards please refer to section 3 of this test report.

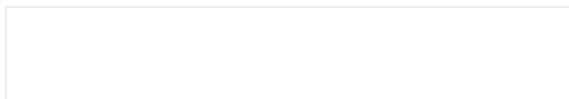
### Test Item

<b>Kind of test item:</b>	<b>Bluetooth Car Gate</b>
<b>Model name:</b>	<b>Cradle for TSR</b>
<b>FCC ID:</b>	<b>QZ9-CRADLE</b>
<b>IC:</b>	<b>5927A-CRADLE</b>
Frequency:	13.56 MHz
Technology tested:	RFID / NFC
Antenna:	Integrated antenna
Power Supply:	13.5V DC by external power supply
Temperature Range:	-20°C to +55°C



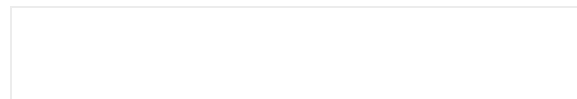
This test report is electronically signed and valid without handwriting signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

### Test report authorised:



Stefan Bös  
Senior Testing Manager

### Test performed:



Andreas Luckenbill  
Expert

## 1 Table of contents

1	Table of contents .....	2
2	General information .....	3
2.1	Notes and disclaimer .....	3
2.2	Application details.....	3
3	Test standard/s .....	3
4	Test environment.....	4
5	Test item.....	4
6	Test laboratories sub-contracted .....	4
7	Summary of measurement results .....	5
8	RF measurements .....	6
8.1	Description of test setup .....	6
8.1.1	Radiated measurements.....	6
8.1.2	Conducted measurements.....	7
8.2	Additional comments .....	7
8.3	RSP100 test report cover sheet / performance test data .....	8
9	Measurement results.....	9
9.1	Timing of the transmitter .....	9
9.2	Field strength of the fundamental .....	11
9.3	99 % emission bandwidth.....	12
9.4	Field strength of the harmonics and spurious .....	13
9.5	Frequency tolerance .....	18
10	Test equipment and ancillaries used for tests .....	19
11	Observations .....	20
Annex A	Photographs of the test setup .....	21
Annex B	External photographs of the EUT .....	24
Annex C	Internal photographs of the EUT .....	27
Annex D	Document history .....	31
Annex E	Further information.....	31
Annex F	Accreditation Certificate .....	32

## 2 General information

### 2.1 Notes and disclaimer

The test results of this test report relate exclusively to the test item specified in this test report. CETECOM ICT Services GmbH does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item.

The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of CETECOM ICT Services GmbH.

The testing service provided by CETECOM ICT Services GmbH has been rendered under the current "General Terms and Conditions for CETECOM ICT Services GmbH".

CETECOM ICT Services GmbH will not be liable for any loss or damage resulting from false, inaccurate, inappropriate or incomplete product information provided by the customer.

Under no circumstances does the CETECOM ICT Services GmbH test report include any endorsement or warranty regarding the functionality, quality or performance of any other product or service provided.

Under no circumstances does the CETECOM ICT Services GmbH test report include or imply any product or service warranties from CETECOM ICT Services GmbH, including, without limitation, any implied warranties of merchantability, fitness for purpose, or non-infringement, all of which are expressly disclaimed by CETECOM ICT Services GmbH.

All rights and remedies regarding vendor's products and services for which CETECOM ICT Services GmbH has prepared this test report shall be provided by the party offering such products or services and not by CETECOM ICT Services GmbH.

In no case this test report can be considered as a Letter of Approval.

This test report is electronically signed and valid without handwritten signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

### 2.2 Application details

Date of receipt of order:	2012-12-04
Date of receipt of test item:	2013-04-01
Start of test:	2013-04-01
End of test:	2013-04-17
Person(s) present during the test:	-/-

## 3 Test standard/s

Test standard	Test standard description
47 CFR Part 15	Title 47 of the Code of Federal Regulations; Chapter I Part 15 - Radio frequency devices
RSS - 210 Issue 8	Spectrum Management and Telecommunications - Radio Standards Specification Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment

#### 4 Test environment

Temperature:	$T_{nom}$	+22 °C during room temperature tests
	$T_{max}$	+55 °C during high temperature tests
	$T_{min}$	-20 °C during low temperature tests
Relative humidity content:		48 %
Barometric pressure:		not relevant for this kind of testing
Power supply:	$V_{nom}$	13.5 V DC by external power supply
	$V_{max}$	16.0 V
	$V_{min}$	6.0 V

#### 5 Test item

Kind of test item	:	Bluetooth Car Gate
Type identification	:	Cradle for TSR
		Cradle for TSR
S/N serial number	:	Rad. 3120000003219255
HW hardware status	:	H05
SW software status	:	X030
Frequency band [MHz]	:	13.56 MHz
Type of radio transmission	:	Single carrier
Use of frequency spectrum	:	
Type of modulation	:	Modulated carrier
Number of channels	:	1
Antenna	:	Integrated antenna
Power supply	:	13.5 V DC by external power supply
Temperature range	:	-20°C to +55 °C

#### 6 Test laboratories sub-contracted

None

**7 Summary of measurement results**

- No deviations from the technical specifications were ascertained**
- There were deviations from the technical specifications ascertained

TC Identifier	Description	Verdict	Date	Remark
RF-Testing	CFR Part 15 RSS 210, Issue 8	Passed	2013-04-25	-/-

Test Specification Clause	Test Case	Temperature Conditions	Power Source Voltages	Pass	Fail	NA	NP	Remark
information only	Timing of the transmitter (Duty cycle correction factor)	Nominal	Nominal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	only to show behavior measured signal
RSS-GEN Issue 3	99 % emission bandwidth	Nominal	Nominal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	complies
§ 15.225 (a)/ RSS-210 Issue 8 Annex 2.6	Fieldstrength of Fundamental	Nominal	Nominal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	complies
§ 15.209/ RSS-210 Issue 8 Annex 2.6	Fieldstrength of harmonics and spurious	Nominal	Nominal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	complies
§ 15.225 (e)/ RSS-210 Issue 8 Annex 2.6	Frequency tolerance	Nominal	Extreme	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	complies
		Extreme	Nominal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Note:** NA = Not Applicable; NP = Not Performed

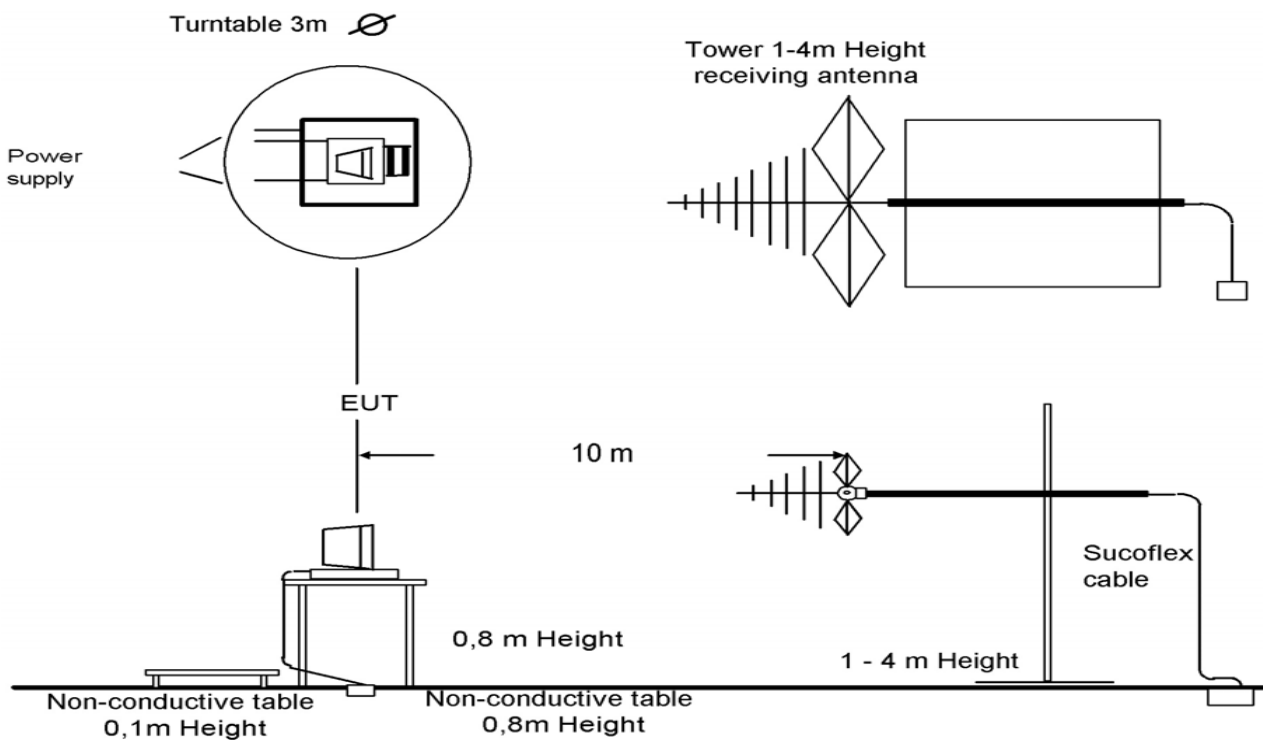
**8 RF measurements**

**8.1 Description of test setup**

**8.1.1 Radiated measurements**

The radiated measurements are performed in vertical and horizontal plane in the frequency range from 9 kHz to 25 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber. The receiving antennas are confirmed with specifications ANSI C63.2-1996 clause 15 and ANSI C63.4-2009 clause 4.1.5. These antennas can be moved over the height range between 1.0 m and 4.0 m in order to search for maximum field strength emitted from EUT. The measurement distances between EUT and receiving antennas are indicated in the test setups for the various frequency ranges. For each measurement, the EUT is rotated in all three axes until the maximum field strength is received. The wanted and unwanted emissions are received by spectrum analysers where the detector modes and resolution bandwidths over various frequency ranges are set according to requirement ANSI C63-4-2009 clause 4.2. Antennas are confirmed with ANSI C63.2-1996 item 15.

Semi anechoic chamber



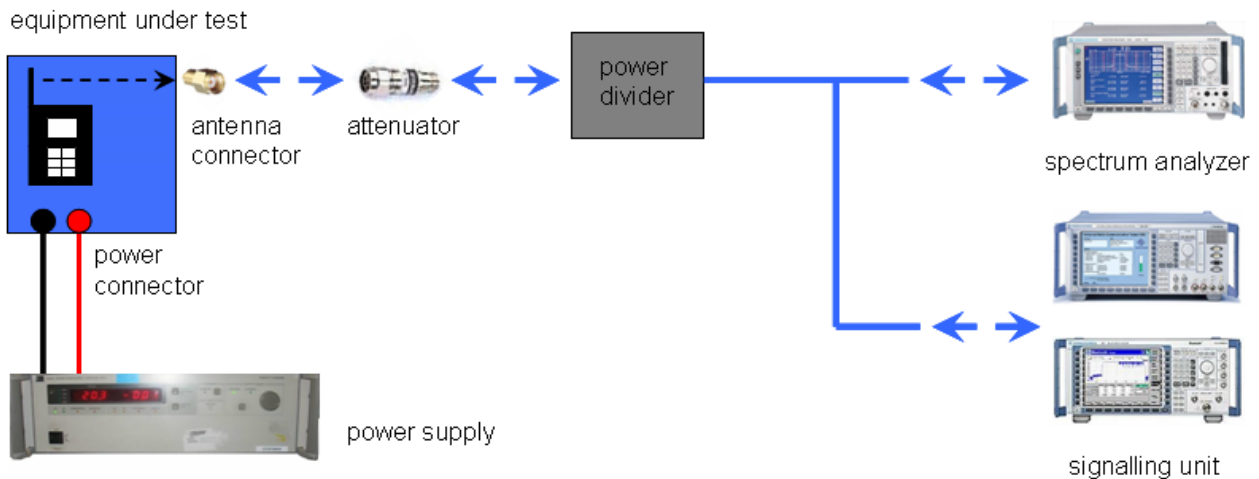
**Picture 1: Diagram radiated measurements**

9 kHz - 30 MHz:	active loop antenna
30 MHz – 1 GHz:	tri-log antenna
> 1 GHz:	horn antenna

The EUT is powered by an external power supply with nominal voltage. The signalling is performed from outside the chamber with a signalling unit (CMU200 or other) by air link using signalling antenna.

### 8.1.2 Conducted measurements

The EUT's RF signal is coupled out by the antenna connector which is supplied by the manufacturer. The signal is first 10dB attenuated before it is power divided (~6dB loss per branch). One of the signal paths is connected to the communication base Station (CMU200 or other), the other one is connected to the spectrum analyzer. The specific losses for both signal paths are first checked within a calibration. The measurement readings on the signalling unit/spectrum analyzer are corrected by the specific test set-up loss. The attenuator, power divider, signalling unit and the spectrum analyzer are impedance matched on 50 Ohm.



Picture 2: Diagram conducted measurements

### 8.2 Additional comments

Reference documents: None

Special test descriptions: None

Configuration descriptions: None

### 8.3 RSP100 test report cover sheet / performance test data

Test Report Number	:	1-3415/11-01-21-A
Equipment Model Number	:	Cradle for TSR
Certification Number	:	5927A-CRADLE
Manufacturer (complete Address)	:	Bury GmbH & Co. KG Robert-Koch-Str. 1-7 32584 Löhne / GERMANY
Tested to radio standards specification no.	:	RSS 210, Issue 8
Open Area Test Site IC No.	:	IC 3462C-1
Frequency Range or fixed frequency	:	13.56 MHz
Field Strength [dB $\mu$ V/m] (at which distance)	:	60 dB $\mu$ V/m @ 10 m
Occupied bandwidth (99%-BW) [kHz]	:	367 kHz
Type of modulation	:	N0N
Emission Designator (TRC-43)	:	367KN0N
Antenna Information	:	Integrated loop antenna
Transmitter Spurious (worst case) [dB $\mu$ V/m @ 3m]	:	30 dB $\mu$ V/m (noise floor) Peak

#### ATTESTATION:

#### DECLARATION OF COMPLIANCE:

I attest that the testing was performed or supervised by me; that the test measurements were made in accordance with the above-mentioned Industry Canada standard(s); and that the equipment identified in this application has been subjected to all the applicable test conditions specified in the Industry Canada standards and all of the requirements of the standard have been met.

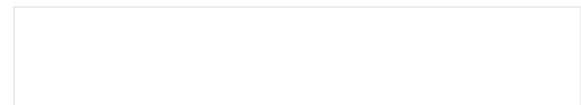
#### Laboratory Manager:

2013-04-25

Date

Andreas Luckenbill

Name



Signature



## 9 Measurement results

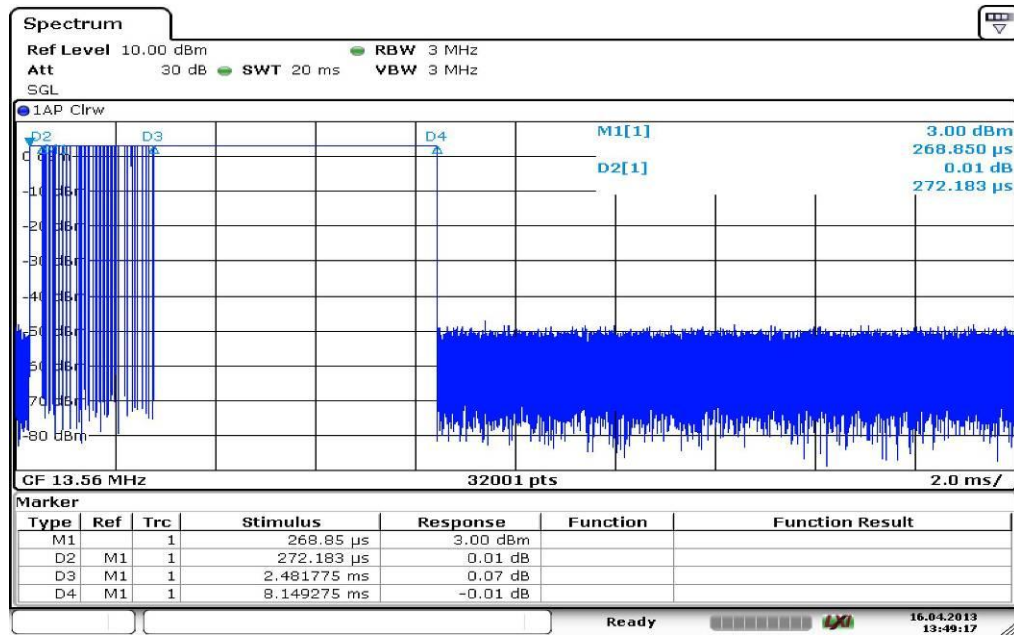
### 9.1 Timing of the transmitter

For information only.

**Measurement:**

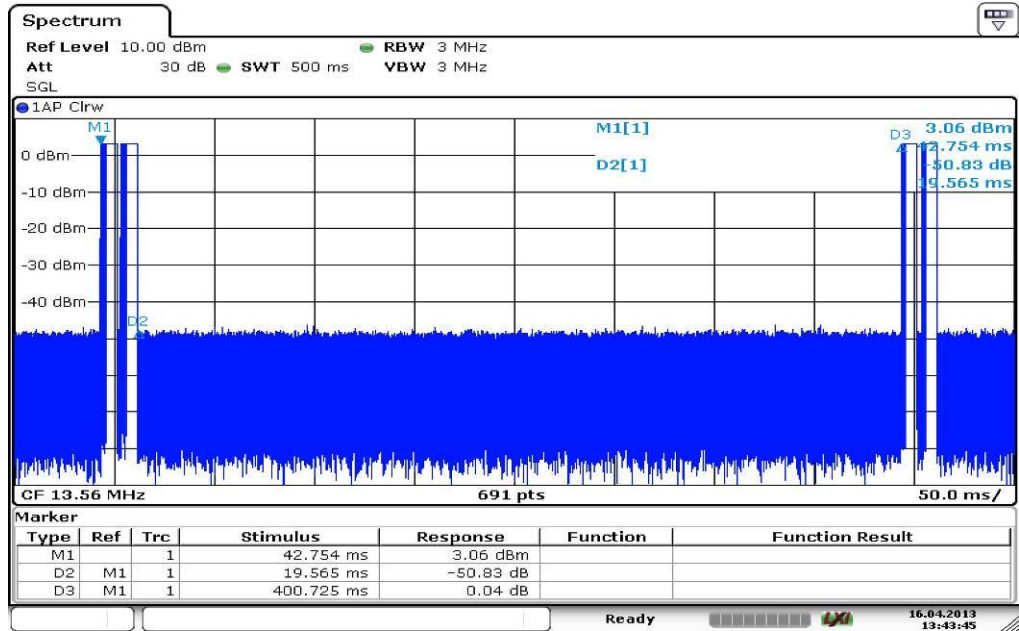
Measurement parameter	
Detector:	Positive peak
Sweep time:	20 ms
Resolution bandwidth:	3 MHz
Video bandwidth:	3 MHz
Span:	Zero span
Trace-Mode:	Single sweep

Plot 1: Transmit burst



Date: 16.APR.2013 13:49:17

Plot 2: Timing of the Transmitter



Date: 16.APR.2013 13:43:45

## 9.2 Field strength of the fundamental

### Measurement:

Measurement parameter	
Detector:	Quasi Peak
Resolution bandwidth:	200 Hz up to 150 kHz, 9 kHz up to 30 MHz, 120 kHz up to 1 GHz
Video bandwidth:	≥ RBW
Trace-Mode:	Max Hold

### Limits:

FCC		IC	
Fundamental Frequency (MHz)	Field strength of Fundamental (μV/m / dBμV/m)	Measurement distance (m)	
13.553 to 13.567	15848 μV/m (84 dBμV/m)	30	
	158489 μV/m (104 dBμV/m)	10 (Recalculated acc. to FCC part15.31 (f2))	

### Result:

TEST CONDITIONS		MAXIMUM POWER (dBμV/m)	
Frequency		13.56 MHz	13.56 MHz
Mode		at 10 m distance	at 30 m distance
T <sub>nom</sub>	V <sub>nom</sub>	60	40*
Measurement uncertainty		±3dB	

\* Limits recalculated from 10m to 30m with 40 dB/decade according to FCC 15.31 (f2).

**Result: passed**

### 9.3 99 % emission bandwidth

#### Measurement:

Measurement parameter	
Detector:	Peak
Resolution bandwidth:	> 1 % span
Video bandwidth:	≥ RBW
Span:	1 MHz
Trace-Mode:	Max Hold

#### Results:

TEST CONDITIONS		99 % emission bandwidth
Frequency		13.56 MHz
$T_{nom}$	$V_{nom}$	367 kHz
Measurement uncertainty		± RBW

## 9.4 Field strength of the harmonics and spurious

### Measurement:

Measurement parameter	
Detector:	Quasi Peak / Average
Sweep time:	Auto
Resolution bandwidth:	120 kHz
Video bandwidth:	300 kHz
Span:	See plots!
Trace-Mode:	Max hold

### Limits:

FCC		IC	
Field strength of the harmonics and spurious.			
Frequency (MHz)	Field strength ( $\mu\text{V/m}$ )	Measurement distance (m)	
0.009 – 0.490	2400/F(kHz)	300	
0.490 – 1.705	24000/F(kHz)	30	
1.705 – 30	30 (29.5 dB $\mu\text{V/m}$ )	30	
30 – 88	100 (40 dB $\mu\text{V/m}$ )	3	
88 – 216	150 (43.5 dB $\mu\text{V/m}$ )	3	
216 – 960	200 (46 dB $\mu\text{V/m}$ )	3	

### Result:

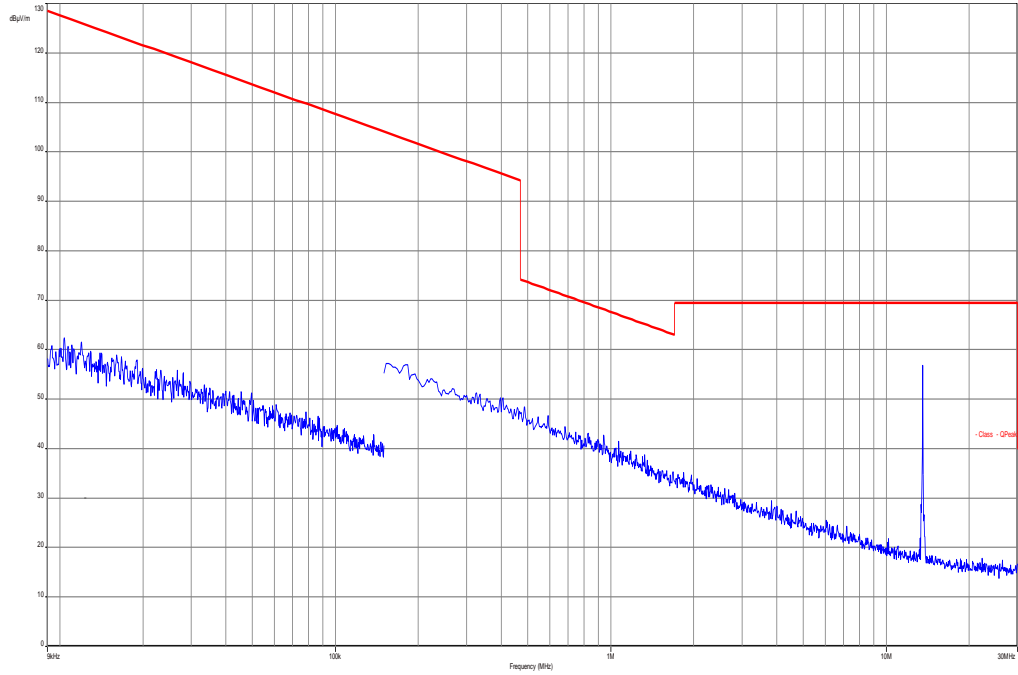
EMISSION LIMITATIONS				
f [MHz]	Detector	Limit max. allowed [dB $\mu\text{V/m}$ ]	Amplitude of emission [dB $\mu\text{V/m}$ ]	Results
No peaks detected. All detected peaks are more then 10 dB below the limit.				

**Result:** passed

**Plots of the measurements**

**Plot 1:** 9 kHz – 30 MHz; Part 15.209 Magnetics, Measurement distance 3m

Transmit frequency 13.56 MHz



**Plot 2:** 30 MHz – 1000 MHz

Transmit frequency 13.56 MHz

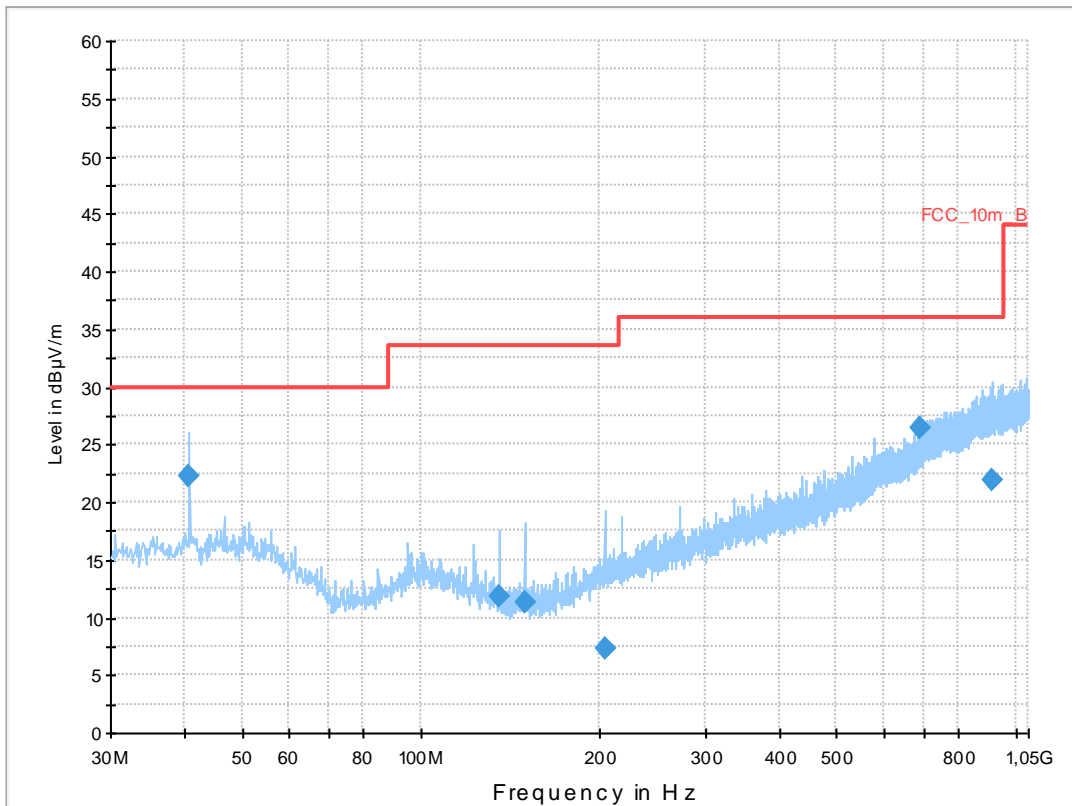
**Common Information**

EUT:  
 Serial Number:  
 Test Description: FCC part 15 B class B @ 10 m  
 Operating Conditions: RF ID  
 Operator Name: Wolsdorfer  
 Comment: DC 12V

**Scan Setup: STAN\_Fin [EMI radiated]**

Hardware Setup: Electric Field (NOS)  
 Receiver: [ESCI 3]  
 Level Unit: dBµV/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



## Final Result 1

Frequency (MHz)	QuasiPeak (dB $\mu$ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)	Comment
40.678800	22.2	1000.0	120.000	100.0	V	268.0	13.4	7.8	30.0	
135.577950	11.8	1000.0	120.000	100.0	V	10.0	9.0	21.7	33.5	
149.208150	11.4	1000.0	120.000	121.0	V	284.0	8.9	22.1	33.5	
203.877750	7.3	1000.0	120.000	107.0	V	45.0	11.8	26.2	33.5	
691.546050	26.5	1000.0	120.000	123.0	H	188.0	22.3	9.5	36.0	
909.771150	21.9	1000.0	120.000	200.0	H	176.0	25.2	14.1	36.0	

## Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

Subrange 1

Frequency Range: 30 MHz - 2 GHz

Receiver: Receiver [ESCI 3]  
@ GPIB0 (ADR 20), SN 100083/003, FW 4.42

Signal Path: without Notch  
FW 1.0

Antenna: VULB 9163  
SN 9163-295, FW ---  
Correction Table (vertical): VULP6113  
Correction Table (horizontal): VULP6113  
Correction Table (vertical): Cable\_EN\_1GHz (1005)  
Correction Table (horizontal): Cable\_EN\_1GHz (1005)

Antenna Tower: Tower [EMCO 2090 Antenna Tower]  
@ GPIB0 (ADR 8), FW REV 3.12

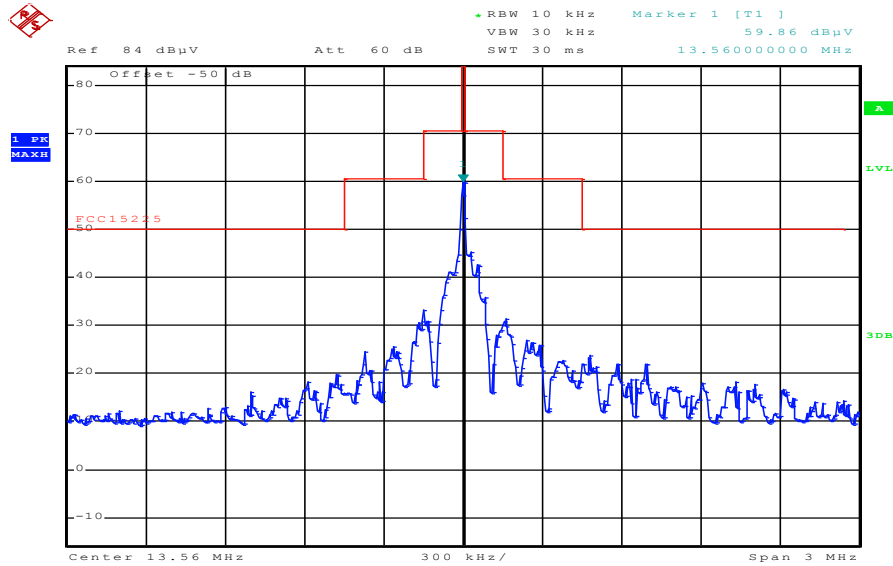
Turntable: Turntable [EMCO Turntable]  
@ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 8.52



**Plot 3: Spectrum mask part 15.225 (a, b, c, d)**

Limits recalculated from 30 m to 10 m with 40 dB/decade according to FCC 15.31 (f2)



Date: 16.APR.2013 17:27:52

The transmitter holds the requirements of FCC 15.225 (a, b, c and d)

## 9.5 Frequency tolerance

### Measurement:

Measurement parameter	
Detector:	Positive peak
Sweep time:	Auto
Resolution bandwidth:	10 Hz
Video bandwidth:	1 MHz
Span:	1 kHz
Trace-Mode:	Clear – write

### Limits:

FCC	IC
The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of -20 degrees to +55 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.	

### Result: passed

Frequency tolerance								
Over temperature variation			Over voltage variation					
Limit is +/- 1.356 kHz			Limit is +/- 1.356 kHz			-/-		
T (°C)]	Frequency	result	Power voltage	Frequency	result	F [MHz]	Detector	Level [µV/m]
-20	13.560	Pass	6.0 V	13.560	Pass	-/-		
-10	13.560	Pass	7.0 V	13.560	Pass			
0°	13.560	Pass	8.0 V	13.560	Pass			
10°	13.560	Pass	9.0 V	13.560	Pass			
20°	13.560	Pass	10.0 V	13.560	Pass			
30°	13.560	Pass	11.0 V	13.560	Pass			
40°	13.560	Pass	12.0 V	13.560	Pass			
50°	13.560	Pass	13.0 V	13.560	Pass			
55°	13.560	Pass	14.0 V	13.560	Pass			
			15.0 V	13.560	Pass			
			16.0 V	13.560	Pass			
Measurement uncertainty			±100 Hz					

## 10 Test equipment and ancillaries used for tests

Typically, the calibrations of the test apparatus are commissioned to and performed by an accredited calibration laboratory. The calibration intervals are determined in accordance with the DIN EN ISO/IEC 17025. In addition to the external calibrations, the laboratory executes comparison measurements with other calibrated test systems or effective verifications. Weekly chamber inspections and range calibrations are performed. Where possible, rf-generating and signalling equipment as well as measuring receivers and analyzers are connected to an external high-precision 10 MHz reference (GPS-based or rubidium frequency standard).

In order to simplify the identification of the equipment used at some special tests, some items of test equipment and ancillaries can be provided with an identifier or number in the equipment list below (Labor/Item).

No.	Lab / Item	Equipment	Type	Manufact.	Serial No.	INV. No Cetecom	Kind of Calibration	Last Calibration	Next Calibration
1	45	Switch-Unit	3488A	HP Meßtechnik	2719A14505	300000368	g		
2	50	DC power supply, 60Vdc, 50A, 1200 W	6032A	HP Meßtechnik	2920A04466	300000580	ne		
3	n. a.	software	SPS_PHE 1.4f	Spitzberger & Spieß	B5981; 5D1081;B597 9	300000210	ne		
4	n. a.	EMI Test Receiver	ESCI 3	R&S	100083	300003312	k	09.01.2013	09.01.2014
5	n. a.	Analyzer- Reference- System (Harmonics and Flicker)	ARS 16/1	SPS	A3509 07/0 0205	300003314	k	14.07.2011	14.07.2013
6	n. a.	Amplifier	JS42- 00502650- 28-5A	MITEQ	1084532	300003379	ev		
7	n. a.	Antenna Tower	Model 2175	ETS- LINDGREN	64762	300003745	izw		
8	n. a.	Positioning Controller	Model 2090	ETS- LINDGREN	64672	300003746	izw		
9	n. a.	Turntable Interface-Box	Model 105637	ETS- LINDGREN	44583	300003747	izw		
10	n. a.	TRIOLOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbe ck	295	300003787	k	12.04.2012	12.04.2014
11	n. a.	Spectrum- Analyzer	FSU26	R&S	200809	300003874	k	16.01.2013	16.01.2014
12	n. a.	DC power supply, 60Vdc, 50A, 1200 W	6032A	HP Meßtechnik	2818A03450	300001040	Ve	12.01.2012	12.01.2015
13	n. a.	Double-Ridged Waveguide Horn Antenna 1-18.0GHz	3115	EMCO	8812-3088	300001032	vIKI!	11.05.2011	11.05.2013
14	n. a.	Active Loop Antenna	6502	EMCO	2210	300001015	ne		
15	n. a.	Anechoic chamber	FAC 3/5m	MWB / TDK	87400/02	300000996	ev		
16	n. a.	Switch / Control Unit	3488A	HP Meßtechnik	*	300000199	ne		
17	n. a.	Switch / Control Unit	3488A	HP Meßtechnik	2719A15013	300001156	ne		
18	n. a.	Three-Way Power Splitter, 50 Ohm	11850C	HP Meßtechnik		300000997	ne		
19	n. a.	Amplifier	js42- 00502650- 28-5a	Parzich GMBH	928979	300003143	ne		
20	n. a.	TRIOLOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbe ck	371	300003854	vIKI!	14.10.2011	14.10.2014
21	n. a.	MXE EMI Receiver 20 Hz bis 26.5 GHz	N9038A	Agilent Technologi es	MY51210197	300004405	k	21.02.2013	21.02.2014
22	n. a.	Test Receiver	ESH2	R&S	871921/095	300002505	Ve	12.01.2012	12.01.2014
23	n. a.	Loop Antenna 9 KHz - 30 MHz	HFH2-Z2	R&S	872096/61	300001824	vIKI!	09.03.2012	09.03.2015

24	n. a.	EMI Test Receiver 9 kHz - 3 GHz incl. Preselector	ESPI3	R&S	101713	300004059	k	22.08.2012	22.08.2013
25	n. a.	Signal Analyzer 40 GHz	FSV40	R&S	101042	300004517	k	22.10.2012	22.10.2013
26	n. a.	Temperature Test Chamber	VT 4002	Heraeus Voetsch	521/83761	300002326	Ve	20.09.2011	20.09.2013
27	n. a.	Power Supply DC	NGPE 40/40	R&S	388	400000078	vIKI!	21.08.2012	21.08.2014

**Agenda:** Kind of Calibration

k	calibration / calibrated	EK	limited calibration
ne	not required (k, ev, izw, zw not required)	zw	cyclical maintenance (external cyclical maintenance)
ev	periodic self verification	izw	internal cyclical maintenance
Ve	long-term stability recognized	g	blocked for accredited testing
vIKI!	Attention: extended calibration interval	*	next calibration ordered / currently in progress
NK!	Attention: not calibrated		

## 11 Observations

No observations exceeding those reported with the single test cases have been made.

## Annex A Photographs of the test setup

Photo documentation:

Photo 1:

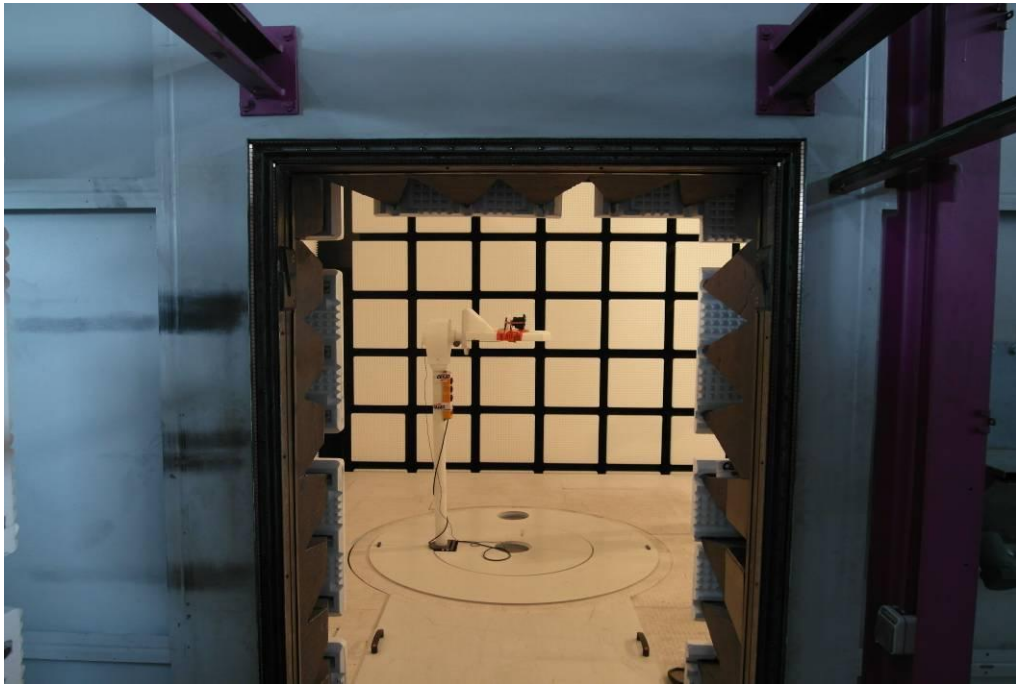


Photo 2:

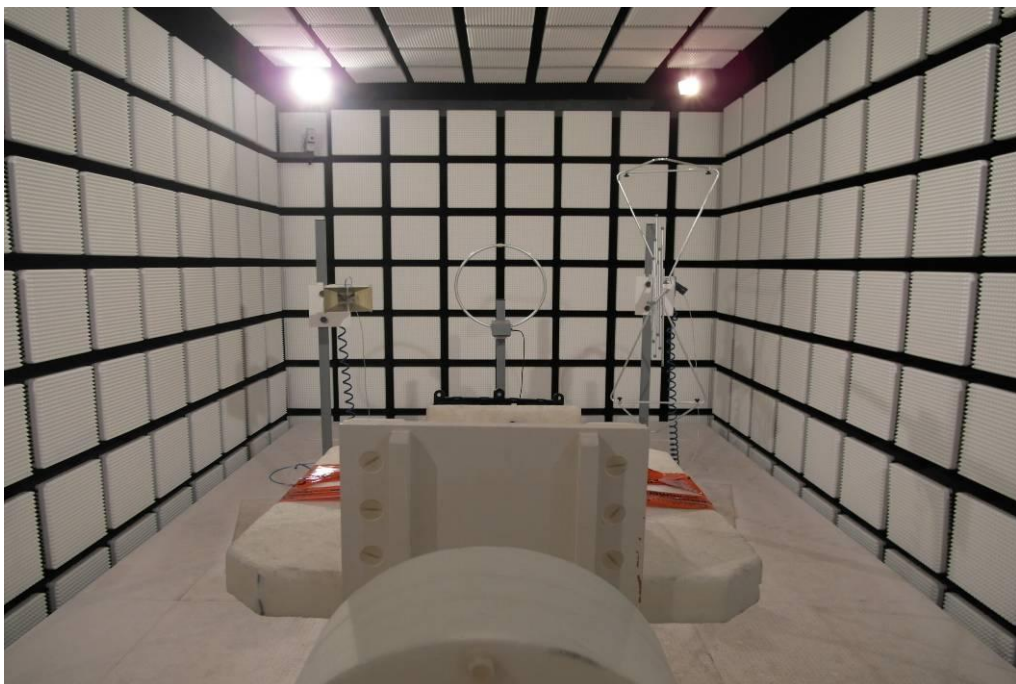


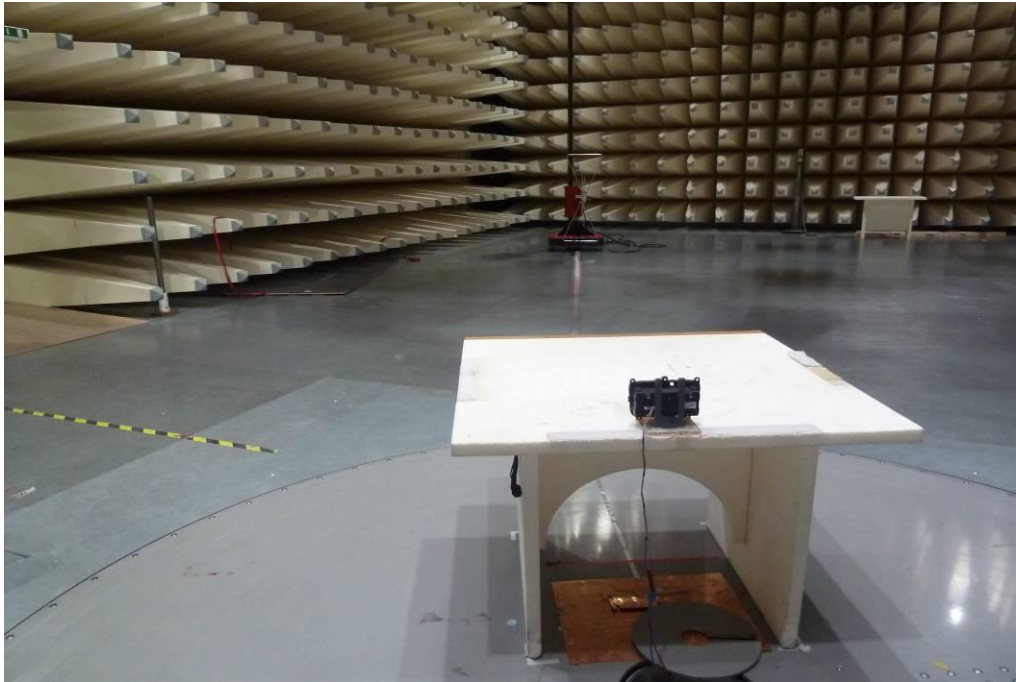
Photo 3:



Photo 4:



Photo 5:



**Annex B External photographs of the EUT**

Photo documentation:

Photo 1:



Photo 2:

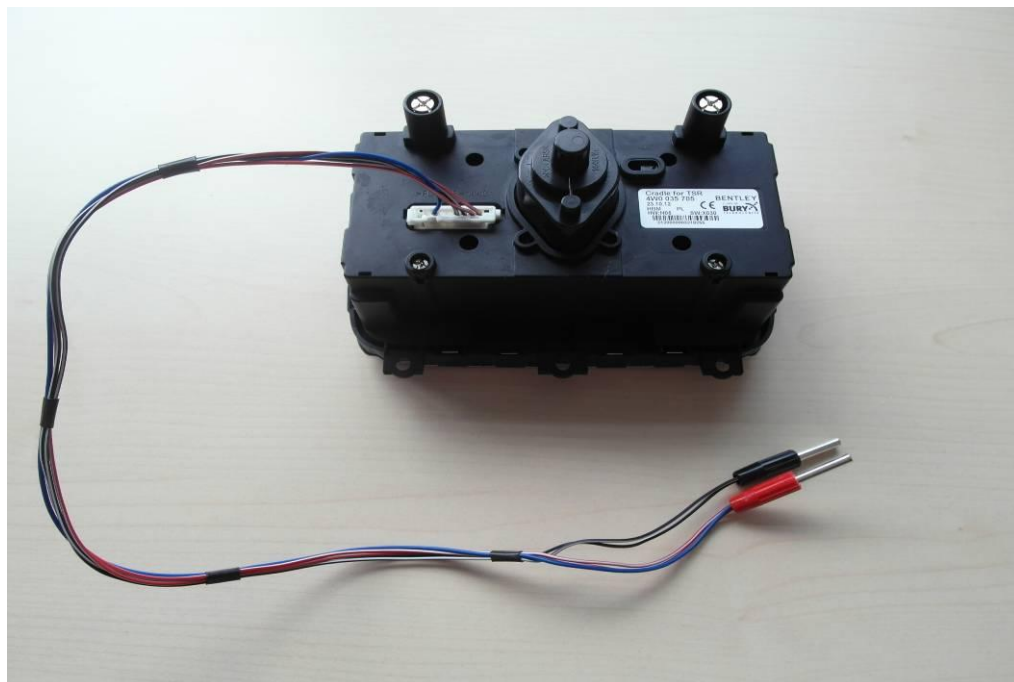




Photo 3:

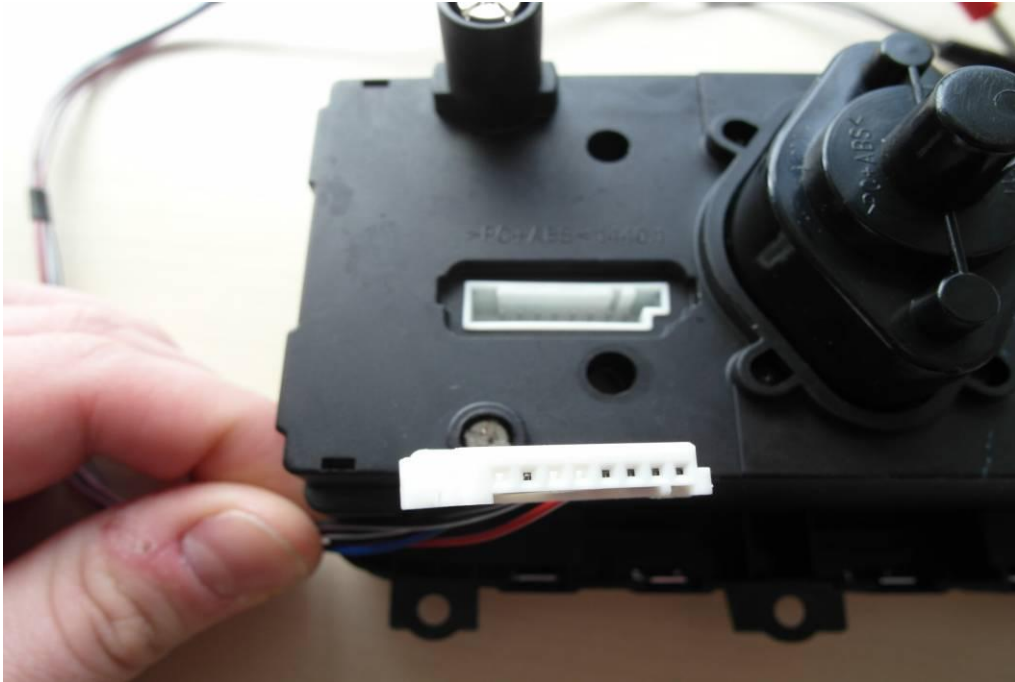


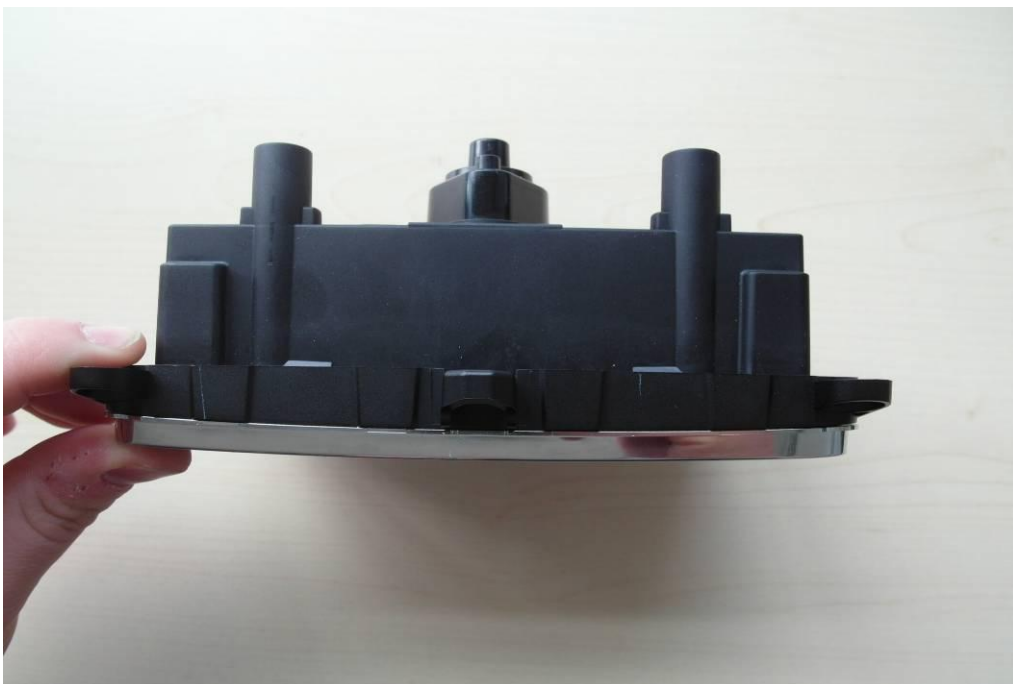
Photo 4:



Photo 5:



Photo 6:



**Annex C Internal photographs of the EUT**

Photo documentation:

Photo 1:



Photo 2:

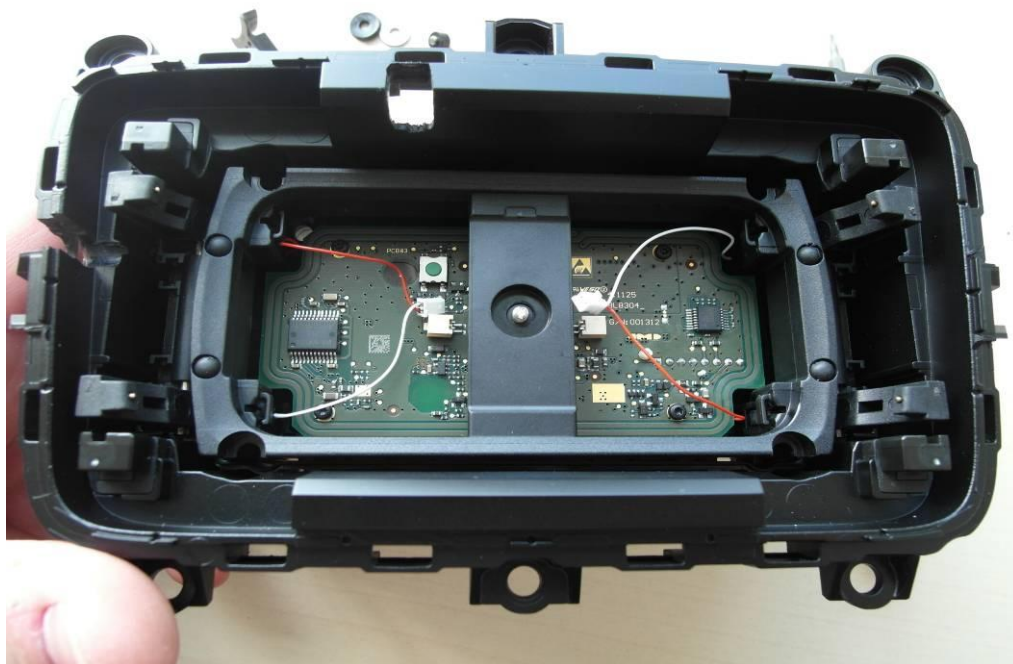


Photo 3:

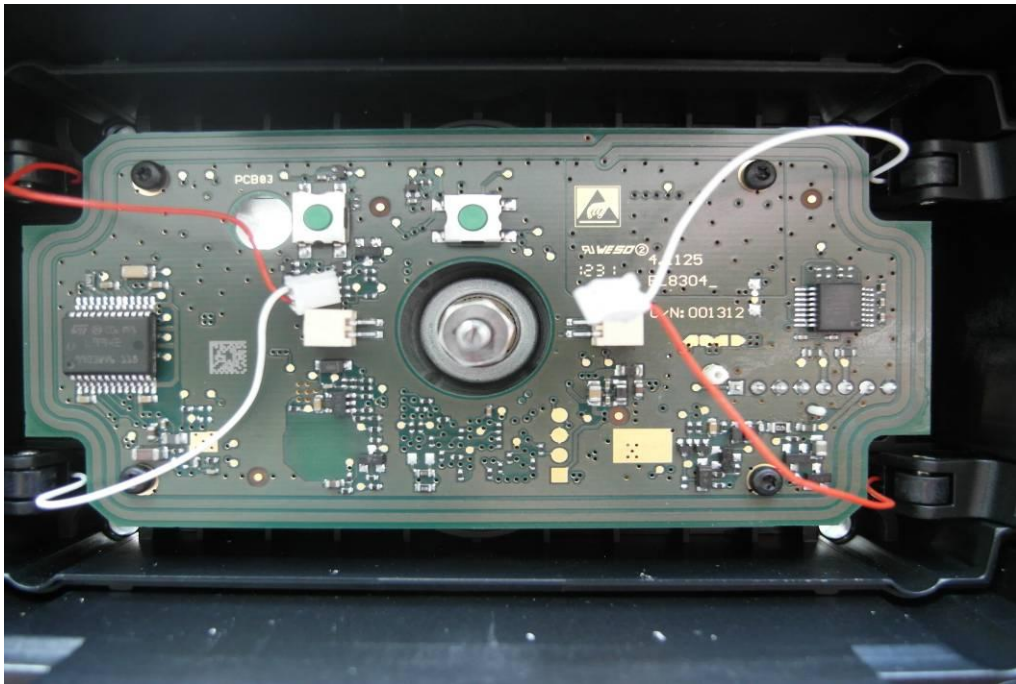


Photo 4:

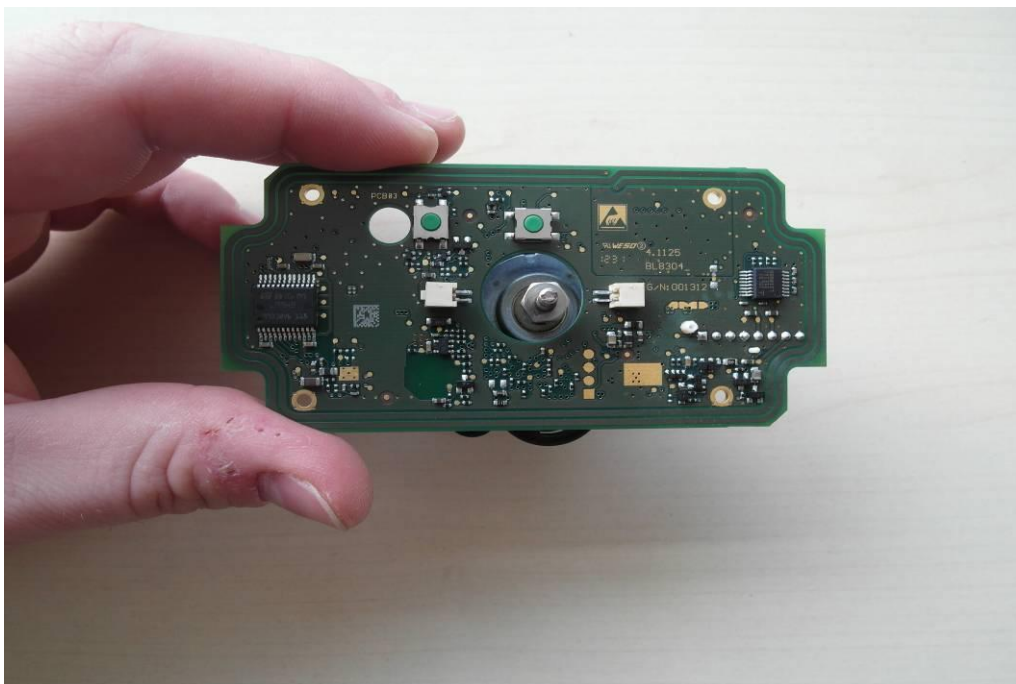


Photo 5:

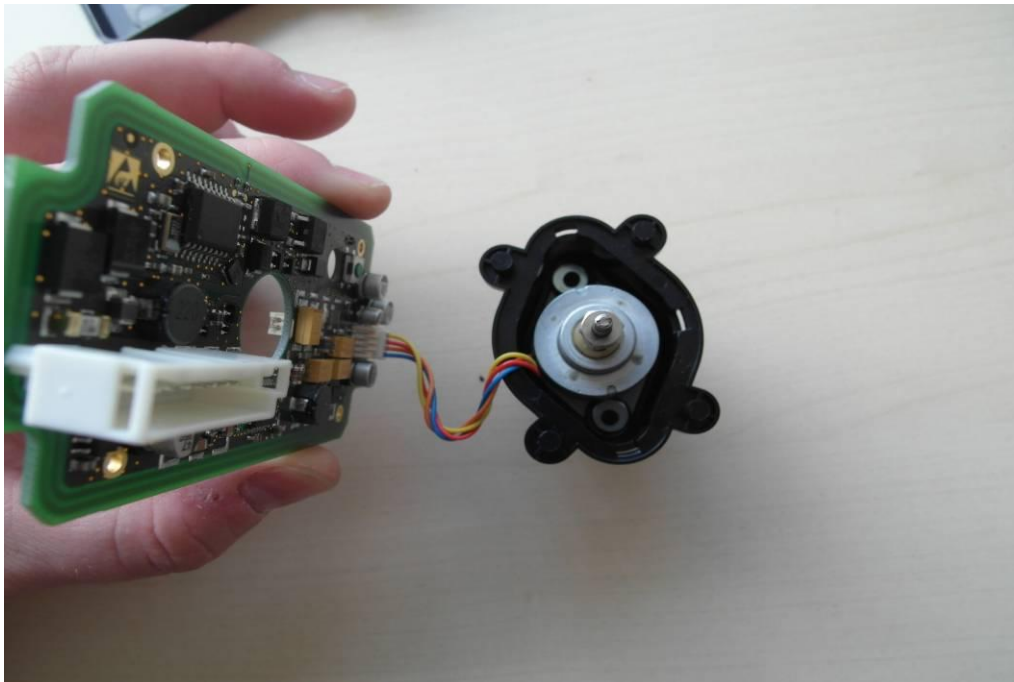


Photo 6:

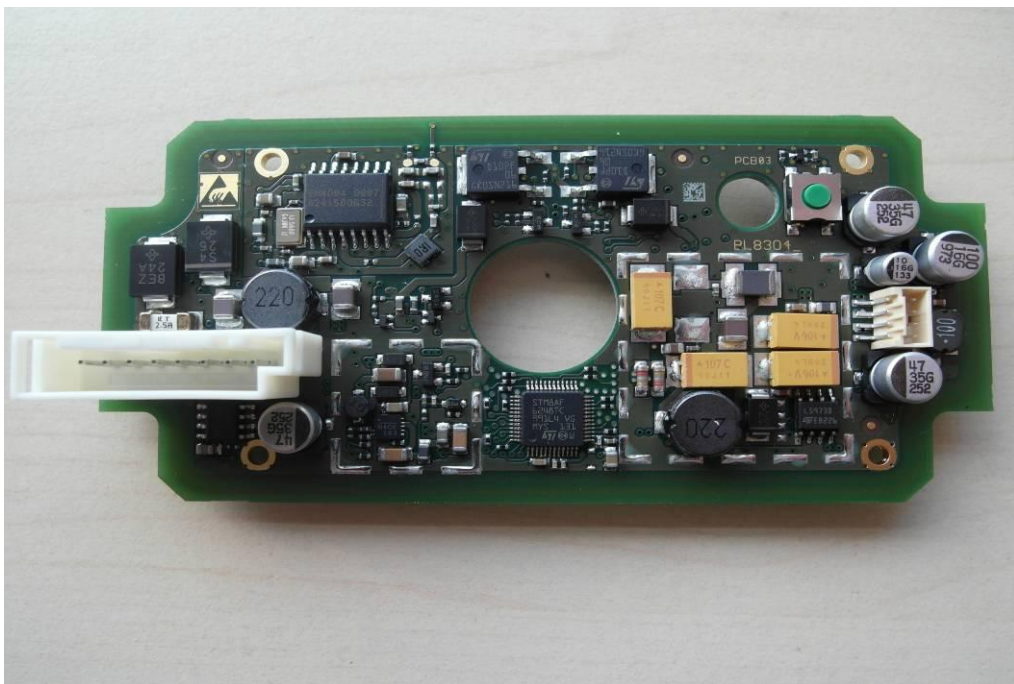
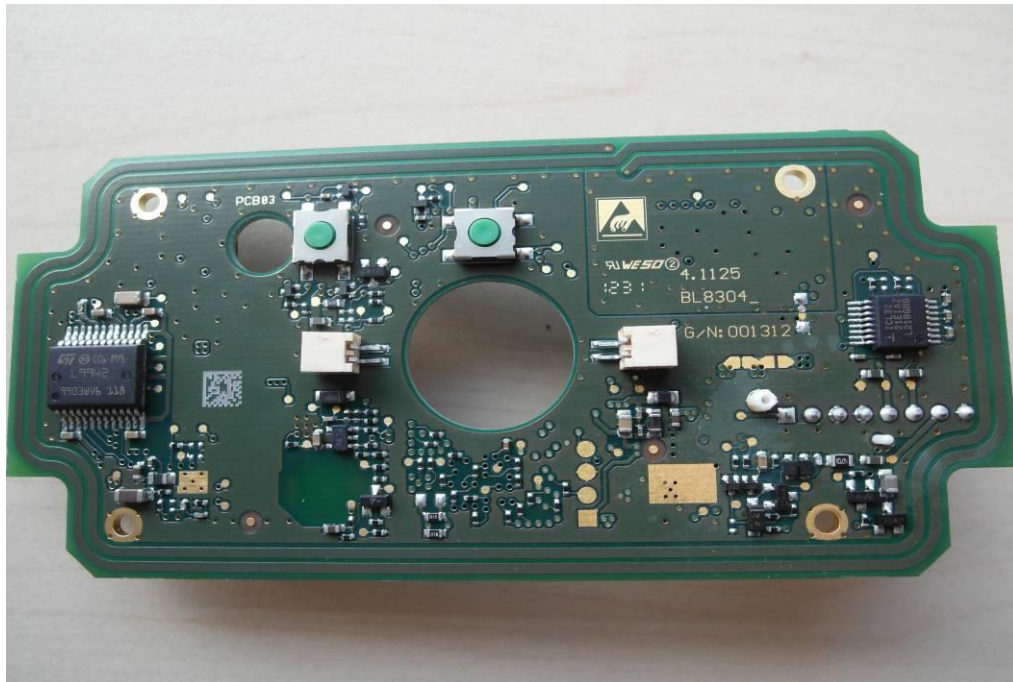


Photo 7:



**Annex D Document history**

Version	Applied changes	Date of release
1.0	Initial release	2013-04-19
-A	Editorial changes	2013-04-25

**Annex E Further information****Glossary**

AVG	-	Average
DUT	-	Device under test
EMC	-	Electromagnetic Compatibility
EN	-	European Standard
EUT	-	Equipment under test
ETSI	-	European Telecommunications Standard Institute
FCC	-	Federal Communication Commission
FCC ID	-	Company Identifier at FCC
HW	-	Hardware
IC	-	Industry Canada
Inv. No.	-	Inventory number
N/A	-	Not applicable
PP	-	Positive peak
QP	-	Quasi peak
S/N	-	Serial number
SW	-	Software

**Annex F Accreditation Certificate**

Front side of certificate

Deutsche Akkreditierungsstelle GmbH  
 Bellehene gemäß § 8 Absatz 1 AkkStelleG i.V.m. § 1 Absatz 1 AkkStelleGBV  
 Unterzeichnerin der Multilateralen Abkommen  
 von EA, ILAC und IAF zur gegenseitigen Anerkennung

**Akkreditierung**

Die Deutsche Akkreditierungsstelle GmbH bestätigt hiermit, dass das Prüflaboratorium  
**CETECOM ICT Services GmbH**  
 Untertürkheimer Straße 6-10, 66117 Saarbrücken

die Kompetenz nach DIN EN ISO/IEC 17025:2005 besitzt, Prüfungen in folgenden Bereichen durchzuführen:

- Drahtgebundene Kommunikation einschließlich xDSL
- VoIP und DECT
- Akustik
- Funk einschließlich WLAN
- Short Range Devices (SRD)
- RFID
- WiMax und Richtfunk
- Mobilfunk (GSM / DCS, Over the Air (OTA) Performance)
- Elektromagnetische Verträglichkeit (EMV) einschließlich Automotive
- Produktsicherheit
- SAR und Hearing Aid Compatibility (HAC)
- Umweltsimulation
- Smart Card Terminals
- Bluetooth
- Wi-Fi- Services

Die Akkreditierungsurkunde gilt nur in Verbindung mit dem Bescheid vom 18.01.2013 mit der Akkreditierungsnummer D-PL-12076-01 und ist gültig 17.01.2018. Sie besteht aus diesem Deckblatt, der Rückseite des Deckblatts und der folgenden Anlage mit insgesamt 80 Seiten.

Registrierungsnummer der Urkunde: D-PL-12076-01-01

Frankfurt am Main, 18.01.2015

Im Auftrag  
 Dr. Ingrid Pflüger  
 Abteilungsleiter

Siehe Hinweise auf der Rückseite

Back side of certificate

Deutsche Akkreditierungsstelle GmbH

Standort Berlin Spittelmarkt 10 10117 Berlin	Standort Frankfurt am Main Gartenstraße 6 60594 Frankfurt am Main	Standort Braunschweig Rundesallee 100 38116 Braunschweig
--	---	--

Die auszugsweise Veröffentlichung der Akkreditierungsurkunde bedarf der vorherigen schriftlichen Zustimmung der Deutsche Akkreditierungsstelle GmbH (DAkkS). Ausgenommen davon ist die separate Weiterverbreitung des Deckblattes durch die umseitig genannte Konformitätsbewertungsstelle in unveränderter Form.

Es darf nicht der Anschein erweckt werden, dass sich die Akkreditierung auch auf Bereiche erstreckt, die über den durch die DAkkS bestätigten Akkreditierungsbereich hinausgehen.

Die Akkreditierung erfolgte gemäß des Gesetzes über die Akkreditierungsstelle (AkkStelleG) vom 31. Juli 2009 (BGBl. I S. 2625) sowie der Verordnung (EG) Nr. 765/2008 des Europäischen Parlaments und des Rates vom 9. Juli 2008 über die Vorschriften für die Akkreditierung und Marktüberwachung im Zusammenhang mit der Vermarktung von Produkten (AbL L 218 vom 9. Juli 2008, S. 30). Die DAkkS ist Unterzeichnerin der Multilateralen Abkommen zur gegenseitigen Anerkennung der European co-operation for Accreditation (EA), des International Accreditation Forum (IAF) und der International Laboratory Accreditation Cooperation (ILAC). Die Unterzeichner dieser Abkommen erkennen ihre Akkreditierungen gegenseitig an.

Der aktuelle Stand der Mitgliedschaft kann folgenden Webseiten entnommen werden:  
 EA: [www.european-accreditation.org](http://www.european-accreditation.org)  
 IAC: [www.ilac.org](http://www.ilac.org)  
 IAF: [www.iaf.nu](http://www.iaf.nu)

**Note:**

The current certificate including annex is published on our website (see link below) or may be received from CETECOM ICT Services on request.

<http://www.cetecom.com/eu/de/cetecom-group/europa/deutschland-saarbruecken/akkreditierungen.html>