



# RF - TEST REPORT

## - Human Exposure -

**Type / Model Name** : Artist-1024

**Product Description** : Modular Intercom Matrix System  
RFID technology 13.56 MHz

**Applicant** : RIEDEL Communications GmbH & Co. KG

**Address** : Uellendahler Str. 353  
42109 Wuppertal, GERMANY

**Manufacturer** : RIEDEL Communications GmbH & Co. KG

**Address** : Uellendahler Str. 353  
42109 Wuppertal, GERMANY

<b>Test Result</b> according to the standards listed in clause 1 test standards:	<b>POSITIVE</b>
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<b>Test Report No. :</b> <b>80171682-05 Rev_0</b>	29. November 2023 Date of issue
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Deutsche  
Akkreditierungsstelle  
D-PL-12030-01-03  
D-PL-12030-01-04

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## 1 TEST STANDARDS

The tests were performed according to following standards:

### **FCC Rules and Regulations Part 1, Subpart I - Procedures Implementing the National Environmental Policy Act of 1969**

Part 1, Subpart I, Section 1.1310	Radiofrequency radiation exposure limits
Part 1, Subpart 2, Section 2.1091	Radiofrequency radiation exposure evaluation: <b>mobile devices</b> .
Part 1, Subpart 2, Section 2.1093	Radiofrequency radiation exposure evaluation: <b>portable devices</b> .
KDB 447498 D04 v01	RF Exposure procedures and equipment authorisation policies for mobile and portable devices, November 29, 2021.
ANSI C95.1: 2005	IEEE Standard for Safety Levels with respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
ETSI TR 100 028 V1.3.1: 2001-03,	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Uncertainties in the Measurement of Mobile Radio Equipment Characteristics—Part 1 and Part 2

## **2 EQUIPMENT UNDER TEST**

### **2.1 Information provided by the Client**

Please note, we do not take any responsibility for information provided by the client or his representative which may have an influence on the validity of the test results.

### **2.2 Sampling**

The customer is responsible for the choice of sample. Sample configuration, start-up and operation is carried out by the customer or according his/her instructions.

### **2.3 Photo documentation of the EUT**

Detailed photos see ATTACHMENT A and ATTACHMENT B

ATTACHMENT A: External views

ATTACHMENT B: Internal views

### **2.4 Short description of the equipment under test (EUT)**

Modular Intercom Matrix  
RFID technology 13.56 MHz

The EUT is tested together with a TAG.

Number of tested samples:	1
Serial number:	460107220159
HVIN:	Artist-1024

### **2.5 EUT operation mode**

The equipment under test was operated during the measurement under the following conditions:

- Continuous reading mode (13.56 MHz), NFC function

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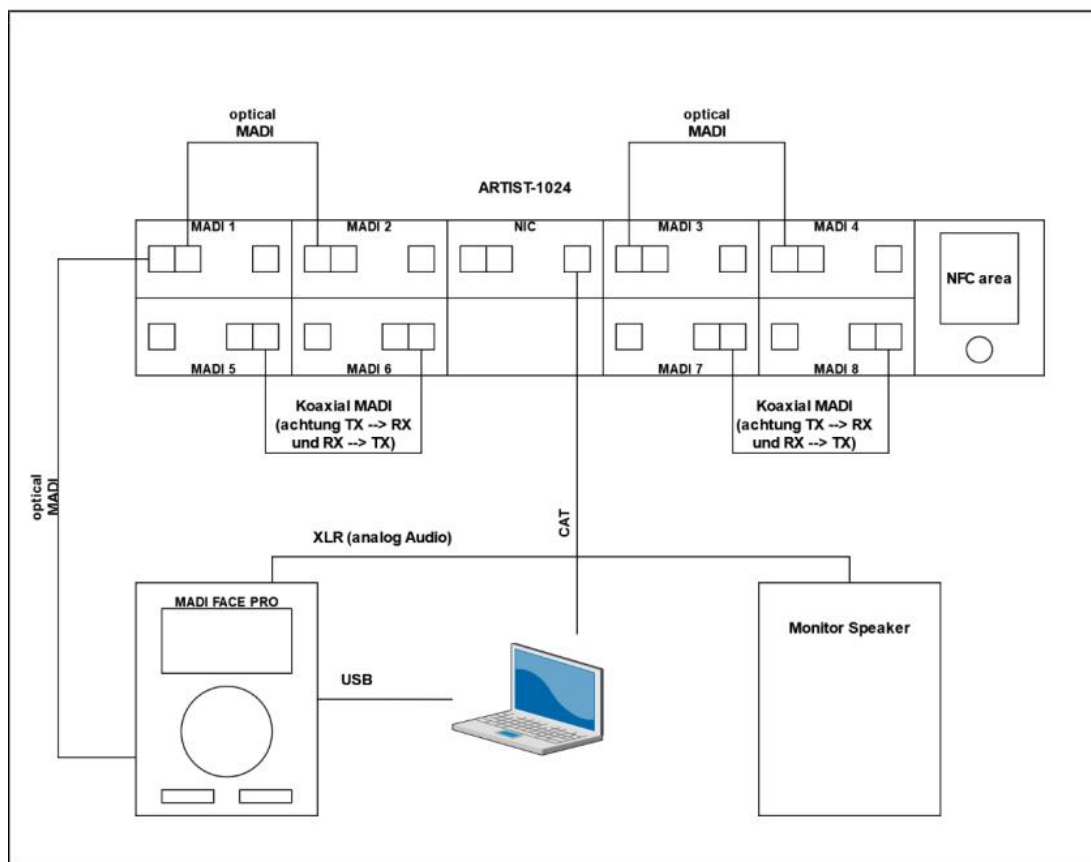
**EUT configuration:**

The following peripheral devices and interface cables were connected during the measurements:

- Laptop Model: DELL, SN.: 736SCS1
- MADI FACE PRO Model: RME, SN.: 79250986
- Monitor Speaker Model: the box pro, SN.: (21)72475VDE00143
- TAG Model: RIEDEL Communications GmbH & Co. KG

**Hardware Setup under test:**

Peripheral devices: Laptop, MADI FACE PRO, Monitor Speaker, TAG



**2.6 Power supply system utilised**

Power supply voltage : 100 – 240 V AC, 50/60 Hz

All tests were carried out with a supply voltage of 120 V, 60 Hz unless otherwise stated. Exceptions are described in the detailed test conditions.

The EUT have two AC ports. Both AC ports were supplied with the same power supply voltage at the same time.

### **3 TEST RESULT SUMMARY**

FCC Rule Part	Description	Result
KDB 447498, 2.1.2	1-mW Test Exemption	passed

#### **3.1 Revision history of test report**

Test report No	Rev.	Issue Date	Changes
80171682-05	0	29 November 2023	Initial test report

The test report with the highest revision number replaces the previous test reports.

#### **3.2 Final assessment**

The equipment under test fulfills the requirements cited in clause 1 test standards.

Date of receipt of test sample : acc. to storage records

Testing commenced on : 28 November 2023

Testing concluded on : 28 November 2023

Checked by:

Tested by:

\_\_\_\_\_  
Klaus Gegenfurtner  
Team Lead Radio

\_\_\_\_\_  
Markus Friedl  
Radio Team

## 4 TEST ENVIRONMENT

### 4.1 Address of the test laboratory

**CSA Group Bayern GmbH  
Ohmstrasse 1-4  
94342 STRASSKIRCHEN  
GERMANY**

### 4.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15 - 35 °C

Humidity: 30 - 60 %

Atmospheric pressure: 86 - 106 kPa

### 4.3 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. It is noted that the expanded measurement uncertainty corresponds to the measurement results from the standard measurement uncertainty multiplied by the coverage factor  $k = 2$ . The true value is located in the corresponding interval with a probability of 95 %. The measurement uncertainty was calculated for all measurements listed in this test report on basis of the ETSI Technical Report TR 100 028 Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1 and Part 2. The results are documented in the quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

### 4.4 Conformity Decision Rule

The applied conformity decision rule is based on ILAC G8:09/2019 clause 4.2.1 Binary Statement for Simple Acceptance Rule ( $w = 0$ ).

Details can be found in the procedure CSA\_B\_V50\_29.

## **5 HUMAN EXPOSURE**

### **5.1 RF Exposure Test Exemptions for Single Source**

For test instruments and accessories used see section 6 Part **RF**.

#### **5.1.1 Photo documentation of the test set-up**

See ATTACHMENT C to this test report. (Location of measurement points)

#### **5.1.2 Applicable standard**

RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices

#### **5.1.3 1-mW Test Exemption**

Per § 1.1307(b)(3)(i)(A), a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance.

This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption, and it cannot be applied in conjunction with any other test exemption.

#### **Continuous reading mode (13.56 MHz), NFC function:**

Frequency [MHz]	Distance	0 cm EIRP [dBm]	Calculated EIRP [mw]	RF Exposure Limit [mW]	Result
	Position				
13.56	1	-21.02	0.0079068	1	passed
13.56	2	-53.50	0.0000045	1	passed
13.56	Top	-36.47	0.0002254	1	passed
13.56	Bottom	-51.26	0.0000075	1	passed

The requirements are **FULFILLED**.

**Remarks:** None

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## 6 USED TEST EQUIPMENT AND ACCESSORIES

All test instruments used, in addition to the test accessories, are calibrated and verified regularly.

Test ID	Model Type	Equipment No.	Next Calib.	Last Calib.	Next Verif.	Last Verif.
RF	ESW26 HFRAE 5161	02-02/03-17-002 02-02/24-11-004	08/03/2024	08/03/2023		