

FCC SAR Exclusion Report



Product name : Simcenter SCADAS Recorder
Applicant : Siemens Industry Software Netherlands BV
FCC ID : 2AF88-SCR2E1
IC : 28364-SCR2E1

Test report No. : P000393365 004 Ver 2.0

Laboratory information

Accreditation

Kiwa Nederland B.V. complies with the accreditation criteria for test laboratories as laid down in ISO/IEC 17025:2017. The accreditation covers the quality system of the laboratory as well as the specific activities as described in the authorized annex bearing the accreditation number L248 and is granted by the Dutch Council For Accreditation (RvA: Raad voor Accreditatie).

Kiwa Nederland B.V. is designated by the FCC as an Accredited Test Firm for compliance testing of equipment subject to Certification under Parts 15 & 18. The Designation number is: NL0001.

Kiwa Nederland B.V. is a Wireless Device Testing laboratory recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements.

The Industry Canada company number for Kiwa Nederland B.V. is: 4173A. The CABID is NL0001.

Kiwa Nederland B.V. is a registered Conformity Assessment body (CAB) under the Japan-EC MRA (Agreement on Mutual Recognition between Japan and the European Community). The registration number is: 201.

Documentation

The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory. The documentation of the testing performed on the tested devices is archived for 10 years at Kiwa Nederland B.V.

Testing Location

Test Site	Kiwa Nederland B.V.
Test Site location	Wilmersdorf 50 7327 AC Apeldoorn The Netherlands Tel. +31 88998 3393
Test Site FCC	NL0001
CABID	NL0001

Revision History

Version	Date	Remarks	By
v0.5	24-07-2024	First draft	PvW
v1.0	06-08-2024	Final release	PvW
V2.0	21-08-2024	Added reference to variants	PvW

Table of Contents

Revision History	2
1 General Description	4
1.1 Applicant	4
1.2 Manufacturer	4
1.3 Tested Equipment Under Test (EUT)	4
1.4 Applicable standards	4
1.5 Conclusions	5
2 SAR exclusion Evaluation	6
2.1 Transmitter specifications	6
2.2 Evaluation calculations	6
2.3 Conclusion	7

1 General Description

1.1 Applicant

Client name: Siemens Industry Software Netherlands BV
Address: Weidehek 53, Breda, the Netherlands
Zip code: 4824 AT
Telephone: 076 5736363
E-mail: Tom.schrijer@siemens.com
Contact name: Mr. Tom Schrijer

1.2 Manufacturer

Manufacturer name: Siemens Industry Software Netherlands BV
Address: Weidehek 53, Breda, the Netherlands
Zip code: 4824 AT
Telephone: 076 5736363
E-mail: Tom.schrijer@siemens.com
Contact name: Mr. Tom Schrijer

1.3 Tested Equipment Under Test (EUT)

Product name: LMS SCADAS Recorder
Brand name: Siemens LMS
FCC ID: 2AF88-SCR2E1
IC: 28364-SCR2E1
Product description: Data acquisition system
Model(s): SCR2E09
SCR2E01
SCR2E02
SCR2E05
Batch and/or serial No. 29170717
Software version: --
Hardware version: --
Date of receipt: 29-03-2017
Tests started: 16-04-2024
Testing ended: 17-06-2024

1.4

Applicable standards

47 CFR § 1.1307 (b)(1)(i)(A)

1.5 Conclusions

The sample of the product showed **NO NON-COMPLIANCES** to the specifications stated in paragraph 1.4 of this report.

The results of the test as stated in this report, are exclusively applicable to the product items as identified in this report. Kiwa Netherland B.V. accepts no responsibility for any properties of product items in this test report, which are not supported by the tests as specified in paragraph 1.4 "*Applicable standards*".

Assessment is performed by:

Name : P. van Wanrooij, BAsC

Review of assessment methods and report by:

Name : ing. Maaz H. Khan

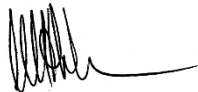
The above conclusions have been verified by the following signatory:

Date : 22-08-2024

Name : ing. M.H. Khan

Function : Test Engineer

Signature :

A handwritten signature in black ink, consisting of several vertical, wavy lines followed by a horizontal stroke extending to the right.

2 SAR exclusion Evaluation

2.1 Transmitter specifications

Transmitter 1: 802.11b/g/n (2.4 GHz)

Variable (unit)	Value	Symbol
Conducted time-averaged output power (mW)	35.2	P
Time-averaged output power ERP (mW)	30.3	P_{ERP}
Operating frequency range (MHz)	2400 – 2483.5	f
Separation distance (cm)	20	d
Separation distance (m)	0.20	R

Transmitter 2: 802.11a/ac (5 GHz)

Variable (unit)	Value	Symbol
Conducted time-averaged output power (mW)	4.92	P
Time-averaged output power ERP (mW)	4.86	P_{ERP}
Operating frequency range (MHz)	5150 – 5250	f
Separation distance (cm)	20	d
Separation distance (m)	0.20	R

2.2 Evaluation calculations

Transmitter 1

Transmitter 1 is evaluated according to method C of KDB 447498 D04 v01

Method C:

Transmitter frequency (MHz)	Threshold ERP (mW)
0.3 – 1.34	$1920 * R^2 * 1000$
1.34 – 30	$3450 * R^2 / f^2 * 1000$
30 – 300	$3830 * R^2$
300 – 1500	$12.8 * R^2 * f$
1500 – 100 GHz	$19200 * R^2$

Filling in the values of R (m) and f (MHz) as reported in clause 2.1 in the threshold calculation equations in the table above gives the result:

$$P_{th} = 768 \text{ mW}$$

$P_{ERP} = 30.3 \text{ mW}$ which is less than the calculated P_{th} so the EUT complies with the MPE-based exemption requirement.

Transmitter 2

Transmitter 2 is evaluated according to method C of KDB 447498 D04 v01

Method C:

Transmitter frequency (MHz)	Threshold ERP (mW)
0.3 – 1.34	$1920 * R^2 * 1000$
1.34 – 30	$3450 * R^2 / f^2 * 1000$
30 – 300	$3830 * R^2$
300 – 1500	$12.8 * R^2 * f$
1500 – 100 GHz	$19200 * R^2$

Filling in the values of R (m) and f (MHz) as reported in clause 2.1 in the threshold calculation equations in the table above gives the result:

$$P_{th} = 768 \text{ mW}$$

$P_{ERP} = 4.86 \text{ mW}$ which is less than the calculated P_{th} so the EUT complies with the MPE-based exemption requirement.

2.3 Conclusion

Since the EUT does not cause exposure in excess of the general population limit (defined in 47 CFR 1.1310 e) (ii)), no additional mitigation actions are required.

<<END OF REPORT>>