FCC MPE Exclusion Report

The RvA is signatory to ILAC - MRA

Product name	: Smart Network Adapter (WLAN / LAN for bicycle trainer)
Applicant	: Tacx bv. (a Garmin Company)
FCC ID	: IPH-0S4443
IC	: 1792A-0S4443

Test report No. : P000309928 006 Ver 1.0

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	18-08-2023	First draft	PvW
v1.0	10-01-2024	Final release	PvW

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1 General Description

1.1 Applicant

Client name:	Tacx bv. (a Garmin Company)
Address:	De Boeg 2, 2343 HK, Oegstgeest, the Netherlands
Telephone:	+31 (0)71 7999292
E-mail:	richard@tacx.nl
Contact name:	Richard Kockelkoren

1.2 Manufacturer

Client name:	Garmin International
Address:	1200 E. 151st, 66062, Olathe, Kansas, USA
Telephone:	(913) 440-1946
E-mail:	Ben.karsak@garmin.com
Contact name:	Mr. Ben Karsak

1.3 Tested Equipment Under Test (EUT)

Product name:	Smart Network Adapter (WLAN / LAN for bicycle trainer)
Brand name:	GARMIN
FCC ID:	IPH-0S4443
IC:	1792A-0S4443
Product type:	LAN/WLAN Accessory
Model(s):	A0S4443
Batch and/or serial No.	P220536V04
Software version:	006-B4443-00
Hardware version:	013-01104-20
Date of receipt:	26-06-2023
Tests started:	05-07-2023
Testing ended:	06-07-2023

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. P.A. Suringa

The above conclusions have been verified by the following signatory:

Date : 11-01-2024

Name : ing P.A. Suringa

Signature :

2 SAR exclusion Evaluation

2.1 Transmitter specifications

Transmitter 1

Variable (unit)	Value	Symbol
Conducted time-averaged output power (mW)	**18.9**	**P**
Time-averaged output power ERP (mW)	**17.7**	**P_{ERP}**
Operating frequency range (MHz)	**2400-2483.5**	**f**
Separation distance (cm)	**5**	**d**
Separation distance (m)	**0.05**	**R**

2.2 Evaluation calculations

Transmitter 1

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

Method B:

$$P_{th}(mW) = \begin{cases} ERP_{20cm} * \left(\frac{d}{20cm}\right)^{x} & d \leq 20\ cm \\ ERP_{20cm} & 20\ cm < d \leq 40\ cm \end{cases}$$

Where:

$$x = -\log_{10}\left(\frac{60}{ERP_{20cm} * \sqrt{f}}\right)$$

$$ERP_{20cm}(mW) = \begin{cases} 2040 * f & 0.3\ GHz \leq f < 1.5\ GHz \\ 3060 & 1.5\ GHz \leq f \leq 6.0\ GHz \end{cases}$$

Filling in the values of d (cm) and f (GHz) as reported in clause 2.1 in the equations above gives the result:
P_{th} = 218.2 mW
P or P_{ERP} = 18.9 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>>