

Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV
Signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition

Accreditation



The Deutsche Akkreditierungsstelle GmbH attests that the testing laboratory

CTC advanced GmbH
Untertürkheimer Straße 6-10, 66117 Saarbrücken

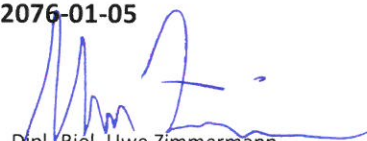
is competent under the terms of DIN EN ISO/IEC 17025:2005 to carry out tests in the following fields:

Telecommunication (FCC Requirements)

The accreditation certificate shall only apply in connection with the notice of accreditation of 11.01.2019 with the accreditation number D-PL-12076-01 and is valid until 21.04.2021. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 5 pages.

Registration number of the certificate: **D-PL-12076-01-05**

Frankfurt am Main, 11.01.2019


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Head of Division

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The publication of extracts of the accreditation certificate is subject to the prior written approval by Deutsche Akkreditierungsstelle GmbH (DAkKS). Exempted is the unchanged form of separate disseminations of the cover sheet by the conformity assessment body mentioned overleaf.

No impression shall be made that the accreditation also extends to fields beyond the scope of accreditation attested by DAkKS.

The accreditation was granted pursuant to the Act on the Accreditation Body (AkkStelleG) of 31 July 2009 (Federal Law Gazette I p. 2625) and the Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products (Official Journal of the European Union L 218 of 9 July 2008, p. 30). DAkKS is a signatory to the Multilateral Agreements for Mutual Recognition of the European co-operation for Accreditation (EA), International Accreditation Forum (IAF) and International Laboratory Accreditation Cooperation (ILAC). The signatories to these agreements recognise each other's accreditations.

The up-to-date state of membership can be retrieved from the following websites:

EA: www.european-accreditation.org

ILAC: www.ilac.org

IAF: www.iaf.nu

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-12076-01-05 according to DIN EN ISO/IEC 17025:2005

Period of validity: 11.01.2019 to 21.04.2021 Date of issue: 11.01.2019

Holder of certificate:

CTC advanced GmbH
Untertürkheimer Straße 6-10, 66117 Saarbrücken

Tests in the fields:

Telecommunication (FCC Requirements)

Section	Scope	Test Method(s)	Frequency (max. assessed)
USA	Unintentional Radiators (FCC Part 15, Subpart B)	ANSI C 63.4-2014 American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	40 GHz
USA	Industrial, Scientific, and Medical Equipment (FCC Part 18) • Consumer ISM equipment	FCC MP-5:1986-02 FCC Methods of Measurements of Radio Noise Emissions from Industrial, Scientific, and Medical Equipment	325 GHz
USA	Intentional Radiators (FCC Part 15 Subpart C)	ANSI C 63.10-2013 American National Standard for Testing of Unlicensed Wireless Devices	231 GHz

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Section	Scope	Test Method(s)	Frequency (max. assessed)
USA	<p>UPCS (FCC Part 15, Subpart D)</p> <ul style="list-style-type: none"> Unlicensed Personal Communication Systems devices 	<p>ANSI C 63.17-2013</p> <p>American National Standard - Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices</p>	40 GHz
USA	<p>U-NII without DFS Intentional Radiators (FCC Part 15, Subpart E)</p> <ul style="list-style-type: none"> Unlicensed National Information Infrastructure Devices (U-NII Devices without DFS) 	<p>ANSI C 63.10-2013</p> <p>American National Standard for Testing of Unlicensed Wireless Devices</p> <p>in combination with KDB Publication 789033</p>	40 GHz
USA	<p>U-NII with DFS Intentional Radiators (FCC Part 15, Subpart E)</p> <ul style="list-style-type: none"> Unlicensed National Information Infrastructure (U-NII) Devices with Dynamic Frequency Selection (DFS) 	<p>FCC KDB Publication 905462 D02</p> <p>UNII DFS Compliance Procedures New Rules v02 (April 8, 2016)</p>	40 GHz
USA	<p>UWB Intentional Radiators (FCC Part 15, Subpart F)</p> <ul style="list-style-type: none"> Ultra-wideband Operation 	<p>ANSI C 63.10-2013</p> <p>American National Standard for Testing of Unlicensed Wireless Devices</p>	200 GHz
USA	<p>BPL Intentional Radiators (FCC Part 15, Subpart G)</p> <ul style="list-style-type: none"> Access Broadband over Power Line (Access BPL) 	<p>ANSI C 63.10-2013</p> <p>American National Standard for Testing of Unlicensed Wireless Devices</p>	40 GHz

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Section	Scope	Test Method(s)	Frequency (max. assessed)
USA	White Space Device Intentional Radiators (FCC Part 15, Subpart H) <ul style="list-style-type: none"> White Space Devices 	ANSI C 63.10-2013 American National Standard for Testing of Unlicensed Wireless Devices	40 GHz
USA	Commercial Mobile Services (FCC Licensed Radio Service Equipment) <ul style="list-style-type: none"> Part 22 (cellular) Part 24 Part 25 (below 3 GHz) Part 27 	ANSI/TIA-603-E-2016 TIA-102.CAAA-E-2016 ANSI C63.26-2015 in combination with KDB Publication 971168	200 GHz
USA	General Mobile Radio Services (FCC Licensed Radio Service Equipment) <ul style="list-style-type: none"> Part 22 (non-cellular) Part 90 (below 3 GHz) Part 95 Part 97 (below 3 GHz) Part 101(below 3 GHz) 	ANSI/TIA-603-E-2016 TIA-102.CAAA-E-2016 ANSI C63.26-2015	200 GHz
USA	Citizens Broadband Radio Services (FCC Licensed Radio Service Equipment) <ul style="list-style-type: none"> Part 96 	ANSI/TIA-603-E-2016 TIA-102.CAAA-E-2016 ANSI C63.26-2015 in combination with KDB Publication 971168 and 940660	200 GHz
USA	Maritime and Aviation Radio Services (FCC Licensed Radio Service Equipment) <ul style="list-style-type: none"> Part 80 Part 87 	ANSI/TIA-603-E-2016 ANSI C63.26-2015	200 GHz

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Section	Scope	Test Method(s)	Frequency (max. assessed)
USA	<p>Microwave and Millimeter Bands Radio Services (FCC Licensed Radio Service Equipment)</p> <ul style="list-style-type: none"> • Part 25 • Part 30 • Part 74 • Part 90 (M DSRC, Y, Z) • Part 95 (M and L) • Part 101 	<p>ANSI/TIA-603-E-2016 TIA-102.CAAA-E-2016 ANSI C63.26-2015</p> <p>in combination with KDB Publication 653005</p>	200 GHz
USA	<p>Broadcast Radio Services (FCC Licensed Radio Service Equipment)</p> <ul style="list-style-type: none"> • Part 73 • Part 74 (below 3 GHz) 	<p>ANSI/TIA-603-E-2016 TIA-102.CAAA-E-2016 ANSI C63.26-2015</p>	200 GHz
USA	<p>RF Exposure</p> <ul style="list-style-type: none"> • Devices subject to SAR requirements 	<p>IEEE Std 1528™-2013</p> <p>IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques</p> <p>in combination with KDB Publication 865664 and in combination with KDB Publication 447498</p>	6 GHz
USA	<p>Hearing Aid Compatibility (Part 20)</p> <ul style="list-style-type: none"> • HAC for Commercial mobile services 	<p>ANSI C 63.19-2011</p> <p>American National Standard for Methods of Measurement of Compatibility between Wireless Communication Devices and Hearing Aids</p>	6 GHz

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Section	Scope	Test Method(s)	Frequency (max. assessed)
USA	Signal Boosters (Part 20) <ul style="list-style-type: none"> • Wideband Consumer signal boosters • Provider-specific signal boosters • Industrial signal boosters Signal Boosters (Section 90.219)	ANSI C63.26-2015 in combination with KDB Publication 935210 D03, D04 and D05	200 GHz