



## Scope of laboratory accreditation according to EN ISO/IEC 17025:2017

**DELTA Development Technology AB**  
Elektronikgatan 47  
721 36 Västerås  
Sweden

Accreditation no:  
**1688**

### **EMC**

<b>Standard reference</b>	<b>Title</b>
<b>EN 61000-3-2:2019</b>	IEC 61000-3-2 ed 3.0 Electromagnetic compatibility (EMC) Part 3-2: Limits - <b>Limits for harmonic current emissions (equipment input current &lt;= 16 A per phase)</b>
<b>EN 61000-3-3:2013</b>	EN 61000-3-3:2013 Electromagnetic compatibility (EMC) Part 3-3: Limits - Limitation of <b>voltage fluctuations and flicker</b> in low-voltage supply systems for equipment with rated current < 16 A per phase and not subject to conditional connection<= 16 A per phase)
<b>IEC 61000-4-2:2008</b> <b>EN 61000-4-2:2009</b>	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques <b>Electrostatic discharge immunity test</b>
<b>IEC 61000-4-3:2020</b> <b>IEC 61000-4-3:2010</b> <b>EN 61000-4-3:2020</b> <b>EN 61000-4-3:2006+A1+A2</b>	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques <b>Radiated, radio-frequency, electromagnetic field immunity test</b>
<b>IEC 61000-4-4:2012</b> <b>EN 61000-4-4:2012</b>	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques <b>Electrical fast transient/burst immunity test</b>
<b>IEC 61000-4-5:2014+A1</b> <b>EN 61000-4-5:2014+A1</b>	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques <b>Surge immunity test</b>
<b>IEC 61000-4-6:2013</b> <b>EN 61000-4-6:2014</b>	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques <b>Immunity to conducted disturbances, induced by radio-frequency fields</b>
<b>IEC 61000-4-8:2009</b> <b>EN 61000-4-8:2010</b>	Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques <b>Power frequency magnetic field immunity test</b>
<b>IEC 61000-4-9:2016</b> <b>EN 61000-4-9:2016</b>	Electromagnetic compatibility (EMC) - Part 4-9: Testing and measurement techniques <b>Pulse magnetic field Immunity test</b>
<b>IEC 61000-4-11:2004+A1</b> <b>IEC 61000-4-11:2020</b> <b>EN 61000-4-11:2004+A1</b> <b>EN 61000-4-11:2020</b>	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques <b>Voltage dips, short interruptions and voltage variations immunity tests</b>
<b>IEC 61000-4-16:2015</b> <b>EN 61000-4-16:2016</b>	Electromagnetic compatibility (EMC) - Part 4-16: Testing and measurement techniques <b>Immunity to conducted CM disturbances 0 to 150 kHz</b>

<b>IEC 61000-4-18:2011</b> <b>EN 61000-4-18:2007+A1</b>	Electromagnetic compatibility (EMC) – Part 4-18: Testing and measurement techniques – <b>Damped oscillatory wave immunity test</b>
<b>IEC 61000-4-29:2000</b> <b>EN 61000-4-29:2000</b>	Electromagnetic compatibility (EMC) - Part 4-29: Testing and measurement techniques <b>Voltage dips, short interruptions and voltage variations on d.c. input power port immunity tests</b>
<b>CISPR 11:2019</b> <b>EN 55011:2009+A1</b> <b>EN 55011:2016+A1+A11</b>	Industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement
<b>CISPR 22:2008</b> <b>EN 55022:2010</b>	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
<b>CISPR 32:2015+A1</b> <b>EN 55032:2015+A1+A11</b>	Electromagnetic compatibility of multimedia equipment - Emission requirements
<b>EN 55035:2017</b>	Electromagnetic compatibility of multimedia equipment – Immunity requirements
<b>CISPR 16-2-1:2014+A1</b>	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-1: Methods of measurement of disturbances and immunity - Conducted disturbance measurements
<b>CISPR 16-2-3:2016+A1</b>	"Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-3: Methods of measurement of disturbance and immunity - Radiated disturbance measurements"
<b>CISPR 24:2010+A1</b> <b>EN 55024:2010+A1</b>	ITE Information technology equipment- Immunity characteristics- Limits and methods of measurement
<b>IEC 61000-6-1:2016</b> <b>EN IEC 61000-6-1:2019</b>	Generic standards - Immunity for residential, commercial and light-industrial environments
<b>IEC 61000-6-2:2016</b> <b>EN 61000-6-2:2019</b>	Generic standards - Immunity for industrial environments
<b>IEC 61000-6-3:2020</b> <b>EN IEC 61000-6-3:2021</b>	Generic standards - Emission standard for equipment in residential environments
<b>IEC 61000-6-4:2018</b> <b>EN IEC 61000-6-4:2019</b>	Generic standards - Emission standard for industrial environments
<b>EN 61000-6-5:2015</b>	EMC Generic Standards - Immunity for power station and substation environments
<b>IEC 61000-6-8:2020</b> <b>EN IEC 61000-6-8:2020</b> <b>EN 12895:2015+A1</b>	Generic standards - Emission standard for professional equipment in commercial and light-industrial locations Industrial trucks – Electromagnetic compatibility
<b>EN 50121-3-2:2016+A1</b> <b>IEC 62236-3-2:2008</b>	Railway applications Electromagnetic compatibility Part 3-2: Rolling stock - Apparatus
<b>EN 50121-4:2016</b> <b>IEC 62236-4:2008</b>	Railway applications - Electromagnetic compatibility Part 4: Emission and immunity of the signalling and telecommunications apparatus
<b>EN 60601-1-2:2015</b> <b>Chapter 7, 8</b>	Medical electrical equipment Part 1-2: General requirements for safety - Collateral standard: Electromagnetic compatibility -Requirements and tests
<b>IEC 61326-1:2012</b> <b>IEC 61326-1:2020</b> <b>EN 61326-1:2013</b> <b>EN 61326-1:2021</b>	Equipment for measurement, control and laboratory use
<b>EN 61326-2-6:2013</b> <b>EN IEC 61326-2-6:2021</b>	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-6: Particular requirements - In vitro diagnostic (IVD) medical equipment

<p><b>IACS E10 rev 8:2021</b> <b>Test no. 13, 14, 15, 16-20</b></p>	<p>E10 Test specification for type approval (specification is applicable, but not confined, to all equipment used for*: - control, protection and safety; - internal communication.)</p>
<p><b>IEC 60945:2002</b></p>	<p>Maritime navigation and radiocommunication equipment and systems - General requirements – Methods of testing and required test result</p>
<p><b>ANSI C63.4: 2014</b></p>	<p>Standard for methods of radio-noise emission from low-voltage electrical and electronic equipment in range of 9 kHz to 40 GHz</p>
<p><b>ANSI C63.10: 2013</b></p>	<p>American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices</p>
<p><b>ETSI EN 300 328</b> <b>V2.1.1:2016</b> <b>V2.2.2:2019</b> <b>Radiated spurious emissions</b></p>	<p>Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2.4 GHz ISM band and using wide band modulation techniques</p>
<p><b>ETSI EN 300 330</b> <b>V2.1.1:2017</b> <b>Radiated H-field and spurious emissions</b></p>	<p>Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz;</p>
<p><b>ETSI EN 300 330-1</b> <b>V1.8.1:2015</b> <b>Radiated spurious emissions</b></p>	<p>Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz; <b>Part 1: Technical characteristics and test methods</b></p>
<p><b>ETSI EN 300 386</b> <b>V2.1.1:2016</b></p>	<p>Electromagnetic compatibility and Radio spectrum Matters (ERM); Telecommunication network equipment; ElectroMagnetic Compatibility (EMC) requirements</p>
<p><b>ETSI EN 301 489-1</b> <b>V2.2.3:2019</b></p>	<p>Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; <b>Part 1: Common technical requirements</b></p>
<p><b>draft ETSI EN 301 489-3</b> <b>V2.1.1:2017</b></p>	<p>Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; <b>Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz</b></p>
<p><b>ETSI EN 301 489-4</b> <b>V2.1.1:2012</b></p>	<p>Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; <b>Part 4: Specific conditions for fixed radio links and ancillary equipment</b></p>
<p><b>ETSI EN 301 489-8</b> <b>V1.2.1:2002</b></p>	<p>Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; <b>Part 8: Specific conditions for GSM base stations</b></p>
<p><b>draft ETSI EN 301 489-17</b> <b>V3.2.0:2017</b></p>	<p>Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment; <b>Part 17: Specific conditions for Broad Band Data Transmission Systems</b></p>

<p><b>ETSI EN 301 489-23</b> <b>V1.5.1:2011</b></p>	<p>Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; <b>Part 23: Specific conditions for IMT-2000 CDMA Direct Spread (UTRA) Base Station (BS) radio, repeater and ancillary equipment</b></p>
<p><b>ETSI EN 301 489-50</b> <b>V2.2.1:2019</b></p>	<p>Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; <b>Part 50: Specific conditions for Cellular Communication Base Station (BS), repeater and ancillary equipment</b></p>
<p><b>ETSI EN 301 908-1</b> <b>V7.1.1:2015</b></p>	<p><b>IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&amp;TTE Directive; Part 1: Introduction and common requirements</b></p>
<p><b>ETSI TS101 087</b> <b>V8.11.0:2009</b> <b>Radiated spurious emissions</b></p>	<p>Digital cellular telecommunications system (Phase 2+); Base Station System (BSS) equipment specification; Radio aspects (3GPP TS 11.21) <b>Chapter 8 Radiated spurious emissions</b></p>
<p><b>ETSI EN 301 502</b> <b>V9.2.1:2010</b> <b>Radiated spurious emissions</b></p>	<p>Harmonized EN for Global System for Mobile communications (GSM); Base Station and Repeater equipment covering essential requirements under article 3.2 of the R&amp;TTE directive</p>
<p><b>FDIS ETSI EN 302 608</b> <b>V2.1.1:2017</b> <b>Radiated emission</b></p>	<p>Short Range Devices (SRD); Radio equipment for Eurobalise railway systems; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU</p>
<p><b>ETSI TS 125.113 / 3GPP TS25:113</b> <b>V10.0.0:2011</b></p>	<p>Universal Mobile Telecommunications System (UMTS); Base station and repeater ElectroMagnetic Compatibility (EMC)</p>
<p><b>ETSI TS 136.113 / 3GPP TS 36.113</b> <b>V10.4.0:2011</b></p>	<p>Evolved Universal Terrestrial Radio Access (E-UTRA); Base Station (BS) and repeater ElectroMagnetic Compatibility (EMC)</p>
<p><b>ETSI TS 137.113 / 3GPP TS 37.113</b> <b>V11.3.0:2014</b></p>	<p>Universal Mobile Telecommunications System (UMTS); LTE; E-UTRA, UTRA and GSM/EDGE; Multi-Standard Radio (MSR) Base Station (BS) Electromagnetic Compatibility (EMC)</p>
<p><b>ETSI TS 137.114 / 3GPP TS 37.114</b> <b>V15.6.0:2019</b></p>	<p>Universal Mobile Telecommunication System, (UMTS); LTE; Active Antenna System (AAS) Base Station (BS) Electromagnetic Compatibility (EMC)</p>

## **Climate and environmental durability**

<b>Standard reference</b>	<b>Title</b>
<b>IEC 60068-2-1: 2007</b>	Environmental testing - Part 2-1: Tests - Test A: Cold
<b>IEC 60068-2-2: 2007</b>	Environmental testing - Part 2-2: Tests - Test B: Dry heat
<b>IEC 60068-2-14: 2009</b>	Environmental testing - Part 2-14: Tests - Test N: Change of temperature
<b>IEC 60068-2-30: 2005</b>	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)
<b>IEC 60068-2-38: 2021, Edition 3</b>	Environmental testing - Part 2-38: Test - Test Z/AD: Composite temperature/humidity cyclic test
<b>IEC 60068-2-67: 1995</b>	Environmental testing – Part 2-67: Tests – Test Cy: Damp heat, steady state, accelerated test primarily intended for components
<b>IEC 60068-2-78: 2012</b>	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state
<b>IEC 60068-2-6: 2007</b>	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)
<b>IEC 60068-2-27: 2008</b>	Environmental testing - Part 2-27: Test - Test Ea and guidance: Shock
<b>IEC 60068-2-64: 2008</b>	Environmental testing – Part 2-64: Tests – Test Fh: Vibration, broadband random and guidance
<b>IEC 60529: 1989+A1+A2</b>	Degrees of protection provided by enclosures (IP Code)
<b>IEC 60068-2-11: 2021, edition 4</b>	Environmental testing - Part 2-11: Tests - Test Ka: Salt mist
<b>IEC 60068-2-52: 2017+A2:2013</b>	Environmental testing - Part 2-52: Tests - Test Kb: Salt mist cyclic

**SWEDAC** 

Styrelsen för ackreditering och teknisk kontroll  
Swedish Board for Accreditation and Conformity Assessment

**ACKREDITERINGSBEVIS**

*ACCREDITATION CERTIFICATE*

**DELTA Development Technology AB**

har genom beslut den  
*following the decision on*

**22 september 1999**

ackrediterats som  
*is accredited as*

**provningslaboratorium**  
*testing laboratory*

och därvid erhållit registreringsnummer  
*and has been assigned registration number*

**1688**

Styrelsen för ackreditering och teknisk kontroll  
*Swedish Board for Accreditation and Conformity Assessment*

  
Lars Ettarp  
Generaldirektör  
*Director General*

Akrediterat organ har rätt att använda nedanstående märke.  
*An accredited body is entitled to use the following logotype.*



Akrediteringens omfattning och villkor framgår av ackrediteringsbeslutet.  
*The scope and conditions of accreditation are specified in the accreditation decision.*

## ACKREDITERINGSCERTIFIKAT/ACCREDITATION CERTIFICATE



Ackred. nr 1688  
Testing  
ISO/IEC 17025

### **DELTA Development Technology AB**

Organisationsnummer 556556-2070

är ackrediterat i i syfte att agera som utsett organ för uppgifter enligt bilaga 1 i beslut daterat 2022-09-27/*is accredited in order to act as designated body for the scope specified in appendix 1 to decision dated 2022-09-27.*

Det utsedda organet är ackrediterat enligt den internationella standarden ISO/IEC 17025:2017.

Ackrediteringen innebär att det utsedda organet har bedömts ha erforderlig teknisk kompetens och att opartiskt och konsekvent utföra ackrediterade tjänster inom de områden som definieras i bilaga 1 enligt ovan. Det ackrediterade utsedda organet ansvarar för resultatet av utförda bedömningar av överensstämmelse samt, i förekommande fall, för val av och tillämpning av arbetsmetoder inom ramen för den meddelade ackrediteringen./*This Designated body is accredited in accordance with the International Standard(s) the International Standard ISO/IEC 17025:2017. The accreditation is a recognition of the competence for and consistent performance and impartiality in the provision of the services defined in appendix 1. The accredited Designated body is responsible for the results of performed conformity assessment as well as, where applicable, for the selection and application of work methods within the scope of the granted accreditation.*

Ackrediteringen gäller tillsvidare. Styrelsen för ackreditering och teknisk kontroll (Swedac) genomför regelbundet tillsyn, och vart fjärde år en förnyad bedömning, för att bekräfta att gällande krav för ackrediteringen kontinuerligt uppfylls./*The accreditation is valid until further notice. The Swedish Board for Accreditation and Conformity Assessment (Swedac) regularly carries out surveillance, and a full reassessment every fourth year, in order to verify that the applicable requirements for accreditation are continually fulfilled.*

Detta ackrediteringscertifikat utfärdades 2022-09-27/*This accreditation certificate was issued 2022-09-27*

Erik Lindell,

Enhetschef enheten för industri/*Division Manager of the Industry Division*

Beslutet om ackreditering utfärdades med stöd av artikel 5.1 i Europaparlamentets och rådets förordning (EG) nr 765/2008 om krav för ackreditering och marknadskontroll m.m. och lagen (2011:791) om ackreditering och teknisk kontroll. Swedac är nationellt ackrediteringsorgan ansvarigt för bedömning av kompetensen hos organ som ansöker om att bli utsedda till anmänt organ för uppgifter enligt harmoniserad unionslagstiftning och ackreditering i anmälningssyfte samt i syfte att verka som utsett organ för detta ändamål. Swedac är signatär till EA:s MLA-avtal för de standarder som omfattas av denna ackreditering./*Accreditation was granted in accordance with Article 5 (1) of Regulation (EC) No 765/2008 regarding accreditation and market surveillance etc. and the Act (SFS 2011:791) concerning Accreditation and Conformity Assessment. Swedac is the Swedish national accreditation body responsible for the assessment of certification bodies, inspection bodies, laboratories, environmental verifiers, validation and verification bodies and bodies for providing programme for proficiency testing applying for accreditation. This accreditation has been issued under the EA MLA and is therefore recognised as equivalent to other accreditations with the same scope of accreditation issued under the EA MLA.*