Infotehnoloogiaseadmed. Raadiohäiringute tunnussuurused. Piirväärtused ja mõõtemeetodid

Information technology equipment - Radio disturbance characteristics – Limits and methods of measurement

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 55022:2011 sisaldab Euroopa standardi EN 55022:2010 ingliskeelset teksti.	This Estonian standard EVS-EN 55022:2011 consists of the English text of the European standard EN 55022:2010.
Standard on kinnitatud Eesti Standardikeskuse 28.02.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 28.02.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 10.12.2010.	Date of Availability of the European standard text 10.12.2010.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

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characteristics, information technology equipment, methods of measurement, radio interference

EUROPEAN STANDARD

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EUROPÄISCHE NORM

EN 55022

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Supersedes EN 55022:2006 + A1:2007 + A2:2010

English version

Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement

(CISPR 22:2008, modified)

Appareils de traitement de l'information - Caractéristiques des perturbations radioélectriques - Limites et méthodes de mesure (CISPR 22:2008, modifiée)

Einrichtungen der Informationstechnik - Funkstöreigenschaften - Grenzwerte und Messverfahren (CISPR 22:2008, modifiziert)

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

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Foreword

The text of the International Standard CISPR 22:2008, prepared by CISPR SC I, "Electromagnetic compatibility of information technology equipment, multimedia equipment and receivers", together with common modifications prepared by the Technical Committee CENELEC TC 210, "Electromagnetic compatibility (EMC)", was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 55022 on 2010-12-01.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 55022:2006 + A1:2007 + FprA2:2009.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2011-12-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2013-12-01

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directives 2004/108/EC and 1999/5/EC. See Annex ZZ.

Annexes ZA and ZZ have been added by CENELEC.

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Endorsement notice

The text of the International Standard CISPR 22:2008 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

4 Classification of ITE

4.2 Class A ITE

***Replace** the 1st paragraph by:*

Class A ITE is a category of all other ITE which satisfies the class A ITE limits but not the class B ITE limits. The following warning shall be included in the instructions for use:

8 General measurement conditions

8.4 Operation of the EUT

***Delete** the final sentence in the 1st paragraph so that it reads:*

The operational conditions of the EUT shall be determined by the manufacturer according to the typical use of the EUT with respect to the expected highest level of emission. The determined operational mode and the rationale for the conditions shall be stated in the test report.

Replace *the last sentence of original 2nd paragraph by:*

Any mechanical activities should be performed.

9 Method of measurement of conducted disturbance at mains terminals and telecommunication ports

9.5 EUT arrangement

9.5.1 General

Replace *the final paragraph with:*

Where this standard gives options for testing particular requirements with a choice of test methods, compliance can be shown against any of the test methods using the appropriate limit.

NOTE In any situation where the equipment is re-tested, the test method originally chosen should be used in order to seek consistency of the results.

9.5.2 Tabletop equipment arrangement

In the last line of item a), ***add*** *"Figure 4", before "Figure 5".*

9.6.3.1 Voltage measurement at balanced telecommunication ports intended for connection to unscreened balanced pairs

Add *the following paragraph at the end of the subclause:*

Where normal functioning cannot be achieved because of the impact of the ISN on the EUT, the measurement shall be carried out using the method given in 9.6.3.5.

Annex G

Delete *Annex G.*

Annex ZA

***Update** the references to the following CISPR publications:*

Publication	Year	Title	EN/HD	Year
CISPR 16-1-1 A1		Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-1: Radio disturbance and immunity measuring apparatus - Measuring apparatus	EN 55016-1-1 A1	2007 2007
CISPR 16-1-4		Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-4: Radio disturbance and immunity measuring apparatus - Ancillary equipment - Radiated disturbances	EN 55016-1-4	2007

***Add** the following references:*

Publication	Year	Title	EN/HD	Year
CISPR 16-2-3 A1	2003 2005	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-3: Methods of measurement of disturbances and immunity – Radiated disturbance measurements	EN 55016-2-3 A1	2004 2005

Annex ZZ
(informative)

Coverage of Essential Requirements of EC Directives

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers essential requirements as given in Annex I Article 1(a) of the EC Directive 2004/108/EC, and essential requirements of Article 3.1(b) (emission only) of the EC Directive 1999/5/EC.

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directives concerned.

WARNING: Other requirements and other EC Directives may be applicable to the products falling within the scope of this standard.

CONTENTS

INTRODUCTION

The scope is extended to the whole radio-frequency range from 9 kHz to 400 GHz, but limits are formulated only in restricted frequency bands, which is considered sufficient to reach adequate emission levels to protect radio broadcast and telecommunication services, and to allow other apparatus to operate as intended at reasonable distance.

INFORMATION TECHNOLOGY EQUIPMENT – RADIO DISTURBANCE CHARACTERISTICS – LIMITS AND METHODS OF MEASUREMENT

1 Scope and object

This International Standard applies to ITE as defined in 3.1.

Procedures are given for the measurement of the levels of spurious signals generated by the ITE and limits are specified for the frequency range 9 kHz to 400 GHz for both class A and class B equipment. No measurements need be performed at frequencies where no limits are specified.

The intention of this publication is to establish uniform requirements for the radio disturbance level of the equipment contained in the scope, to fix limits of disturbance, to describe methods of measurement and to standardize operating conditions and interpretation of results.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60083:2006, *Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC*

IEC 61000-4-6:2003, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*[1]
Amendment 1 (2004)
Amendment 2 (2006)

CISPR 11:2003, *Industrial, scientific, and medical (ISM) radio-frequency equipment – Electromagnetic disturbance characteristics – Limits and methods of measurement*[2]
Amendment 1 (2004)

CISPR 13:2001, *Sound and television broadcast receivers and associated equipment – Radio disturbance characteristics – Limits and methods of measurement*[3]
Amendment 1 (2003)
Amendment 2 (2006)

CISPR 16-1-1:2006, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-1: Radio disturbance and immunity measuring apparatus – Measuring apparatus*[4]
Amendment 1 (2006)
Amendment 2 (2007)

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1 There exists a consolidated edition 2.2 (2006) including edition 2.0, its Amendment 1 (2004) and its Amendment 2 (2006).

2 There exists a consolidated edition 4.1 (2004) including edition 4.0 and its Amendment 1 (2004).

3 There exists a consolidated edition 4.2 (2006) including edition 4.0, its Amendment 1 (2003) and its Amendment 2 (2006).

4 There exists a consolidated edition 2.2 (2007) including edition 2.0, its Amendment 1 (2006) and its Amendment 2 (2007).

CISPR 16-1-2:2003, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-2: Radio disturbance and immunity measuring apparatus – Ancillary equipment – Conducted disturbances* [5]
Amendment 1 (2004)
Amendment 2 (2006)

CISPR 16-1-4:2007, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-4: Radio disturbance and immunity measuring apparatus – Ancillary equipment – Radiated disturbances*[6]

CISPR 16-2-3:2006, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 2-3: Methods of measurement of disturbances and immunity – Radiated disturbance measurements*

CISPR 16-4-2:2003, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-2: Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements*

3 Definitions

For the purposes of this document the following definitions apply:

3.1
information technology equipment (ITE)
any equipment:

a) which has a primary function of either (or a combination of) entry, storage, display, retrieval, transmission, processing, switching, or control, of data and of telecommunication messages and which may be equipped with one or more terminal ports typically operated for information transfer;

b) with a rated supply voltage not exceeding 600 V.

It includes, for example, data processing equipment, office machines, electronic business equipment and telecommunication equipment.

Any equipment (or part of the ITE equipment) which has a primary function of radio transmission and/or reception according to the ITU Radio Regulations are excluded from the scope of this publication.

NOTE Any equipment which has a function of radio transmission and/or reception according to the definitions of the ITU Radio Regulations should fulfil the national radio regulations, whether or not this publication is also valid.

Equipment, for which all disturbance requirements in the frequency range are explicitly formulated in other IEC or CISPR publications, are excluded from the scope of this publication.

3.2
equipment under test (EUT)
representative ITE or functionally interactive group of ITE (system) which includes one or more host unit(s) and is used for evaluation purposes

3.3
host unit
part of an ITE system or unit that provides the mechanical housing for modules, which may contain radio-frequency sources, and may provide power distribution to other ITE. Power distribution may be a.c., d.c., or both between the host unit(s) and modules or other ITE

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5 There exists a consolidated edition 1.2 (2006) including edition 1.0, its Amendment 1 (2004) and its Amendment 2 (2006).

6 There exists a consolidated edition 2.1 (2008) including edition 2.0 and its Amendment 1 (2007).