

**Digital living network alliance (DLNA) home networked
device interoperability guidelines - Part 3: Link
protection**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 62481-3:2011 sisaldab Euroopa standardi EN 62481-3:2011 ingliskeelset teksti.

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**Digital living network alliance (DLNA) home networked device
interoperability guidelines -
Part 3: Link protection
(IEC 62481-3:2010)**

Instructions pour l'interopérabilité des
appareils raccordés à un réseau
domestique DLNA (Digital living network
alliance) -
Partie 3: Protection des liaisons
(CEI 62481-3:2010)

Digital living network alliance (DLNA)
Interoperabilitäts-Richtlinien für Geräte im
Heimnetzwerk -
Teil 3: Verbindungsschutz
(IEC 62481-3:2010)

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CENELEC

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

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Foreword

The text of document 100/1617/CDV, future edition 1 of IEC 62481-3, prepared by IEC TC 100, Audio, video and multimedia systems and equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62481-3 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.

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) | 2011-09-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2013-12-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62481-3:2010 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62481-1	2007	Digital living network alliance (DLNA) home networked device interoperability guidelines - Part 1: Architecture and protocols	-	-
IEC 62481-2	2007	Digital living network alliance (DLNA) home networked device interoperability guidelines - Part 2: DLNA media formats	-	-
ISO/IEC 13818-1	2007	Information technology - Generic coding of moving pictures and associated audio information: Systems	-	-
ISO/IEC 13818-2	2000	Information technology - Generic coding of moving pictures and associated audio information: Video	-	-
ISO/IEC 14496-2	2004	Information technology - Coding of audio-visual objects - Part 2: Visual	-	-
+ A1	2004		-	-
ISO/IEC 29341-3-10	2008	Information technology - UPnP Device Architecture - Part 3-10: Audio Video Device Control Protocol - Audio Video Transport Service	-	-
ISO/IEC 29341-3-11	2008	Information technology - UPnP Device Architecture - Part 3-11: Audio Video Device Control Protocol - Connection Manager Service	-	-
ISO/IEC 29341-3-12	2008	Information technology - UPnP Device Architecture - Part 3-12: Audio Video Device Control Protocol - Content Directory Service	-	-
DTCP Volume 1, Revision 1.4	2005	Digital transmission content protection specification	-	-
DTCP Volume 1 Supplement E, Revision 1.1	2005	Mapping DCTP to IP	-	-
DTCP Audio Compliance Rules EXHIBIT B-2	2002	Compliance rules for licensed products that receive or transmit commercial audio works	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEEE 802.1Q	-	IEEE Standard for Local and Metropolitan Area Networks - Virtual Bridged Local Area Networks	-	-
IEEE 802.11	-	IEEE Standard for Information technology- Telecommunications and information exchange between systems-Local and metropolitan area networks-Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications	-	-

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DIGITAL LIVING NETWORK ALLIANCE (DLNA) HOME NETWORKED DEVICE INTEROPERABILITY GUIDELINES –

Part 3: Link protection

1 Scope

This part of IEC 62481 specifies the DLNA link protection guidelines, which are an extension of the DLNA guidelines. DLNA link protection is defined as the protection of a content stream between two devices on a DLNA network from illegitimate observation or interception using the protocols defined within this standard.

Content protection is an important mechanism for ensuring that commercial content is protected from piracy and illegitimate redistribution. Link protection is a technique that enables distribution of protected commercial content on a home network, thus resulting in greater consumer flexibility while still preserving the rights of copyright holders and content providers.

The guidelines in this standard reference existing technologies for link protection and provide mechanisms for interoperability between different implementations as well as integration with the DLNA architecture.

This standard is organized to align with the overall structure of IEC 62481-1 and IEC 62481-2.

2 Normative reference

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 62481-1:2007, *Digital living network alliance (DLNA) home networked device interoperability guidelines – Part 1: Architecture and protocols*

IEC 62481-2:2007, *Digital living network alliance (DLNA) home networked device interoperability guidelines – Part 2: DLNA media formats*

ISO/IEC 13818-1:2007, *Information technology – Generic coding of moving pictures and associated audio information: Systems*

ISO/IEC 13818-2:2007, *Information technology – Generic coding of moving pictures and associated audio information: Video*

ISO/IEC 14496-2:2004 *Information technology – Coding of audio-visual objects – Part 2: Visual*

Amendment 1 (2004), *Error resilient simple scalable profile*

ISO/IEC 29341-3-10:2008, *Information technology – UPnP device architecture – Part 3-10: Audio video device control protocol – Audio video transport service*

ISO/IEC 29341-3-11:2008, *Information technology – UPnP device architecture – Part 3-11: Audio video device control protocol – Connection manager service*

ISO/IEC 29341-3-12:2008, *Information technology – UPnP device architecture – Part 3-12: Audio video device control protocol – Content directory service*

DTCP Volume 1 (informational version), *Digital transmission content protection specification*
Volume 1, Revision 1.4: February 28, 2005
http://www.dtcp.com/data/info/20050228_dtcp_vol_1_1p4.pdf

DTCP Volume 1 Supplement E (informational version)
Mapping DTCP to IP, Revision 1.1: February 28, 2005
http://www.dtcp.com/data/info/20050228_dtcp_VISE_1p1.pdf

DTCP Audio Compliance Rules EXHIBIT B-2:
Compliance rules for licensed products that receive or transmit commercial audio works,
June 2002
http://www.dtcp.com/data/Compliance_Rules_Audio_020610.pdf

IEEE 802.1Q, *IEEE standard for information technology – Telecommunications and information exchange between systems – IEEE standard for local and metropolitan area networks – Common specifications – Virtual Bridged Local Area Networks*

IEEE 802.11, *IEEE standard for information technology – Telecommunications and information exchange between systems – Local and metropolitan area networks-specific requirements – Part 11: Wireless LAN Medium, Access Control (MAC) and Physical Layer (PHY) specifications*

3 Terms, definitions and acronyms

For the purposes of this document, the following terms, definitions and acronyms apply.

3.1 Terms and definition

3.1.1

authentication and key exchange

AKE

step in a link protection system where the receiving device is authenticated and given the correct keys for the content

3.1.2

advanced system format

ASF

media format encapsulation for the transmission of content

3.1.3

audio with video

AV

any media content that contains both moving picture and sound

3.1.4

AV transport

AVT

UPnP service that provides network-based control for common transport operations such as play, stop, pause, next, previous, and seek, a standard UPnP DCP

3.1.5

cleartext

unencrypted content stream after decryption by the upstream content protection system and before encryption by the link protection system