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This standard includes the English version of the European Standard.

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EN 62481-3

March 2014

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Supersedes EN 62481-3:2011

English version

**Digital living network alliance (DLNA) home networked device
interoperability guidelines -
Part 3: Link protection
(IEC 62481-3:2013)**

Lignes directrices pour l'interopérabilité
des dispositifs domestiques DLNA (Digital
Living Network Alliance) -
Partie 3: Protection des liaisons
(CEI 62481-3:2013)

Digital living network alliance (DLNA)
Interoperabilitäts-Richtlinien für Geräte im
Heimnetzwerk -
Teil 3: Verbindungsschutz
(IEC 62481-3:2013)

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Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 100/1994/CDV, future edition 2 of IEC 62481-3, prepared by technical area 9, "Audio, video and multimedia applications for end-user network", of IEC/TC 100, "Audio, video and multimedia systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62481-3:2014.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-09-21
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-11-27

This document supersedes EN 62481-3:2011.

EN 62481-3:2014 includes the following significant technical changes with respect to EN 62481-3:2011:

- a) includes variable play (trick mode) support;
- b) includes updates to resolve interoperability issues.

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Annex ZA

(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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	2013	Digital living network alliance (DLNA) home networked device interoperability guidelines - Part 1: Architecture and protocols	EN 62481-1	2012
IEC 62481-2	2013	Digital living network alliance (DLNA) home networked device interoperability guidelines - Part 2: DLNA media formats	EN 62481-2	2014
ISO/IEC 13818-1 + corr. December	2000 2002	Information technology - Generic coding of moving pictures and associated audio information - Part 1: Systems	-	-
ISO/IEC 14496-2	2004	Information Technology – Coding of audio-visual objects - Part 2: Visual	-	-
ISO/IEC 29341-3-10 -	-	Information technology - UPnP Device Architecture - Part 3-10: Audio Video Device Control Protocol - Audio Video Transport Service	-	-
ISO/IEC 29341-3-11 -	-	Information technology - UPnP Device Architecture - Part 3-11: Audio Video Device Control Protocol - Connection Manager Service	-	-
IETF RFC 1191	1990	Path MTU Discovery	-	-
IETF RFC 2616	-	Hypertext Transfer Protocol HTTP/1.1.	-	-
IETF RFC 3551	-	RTP Profile for Audio and Video Conferences with Minimal Control	-	-
IETF RFC 3550	-	A Transport Protocol for Real-Time Applications	-	-
IETF RFC 1738	1994	Uniform Resource Locators (URL)	-	-
DTCP Volume 1	2005	Digital transmission content protection specification	-	-
DTCP Volume 1 Supplement E	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	-	-
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	-	-
RTP	-	RTP Payload Format for Windows Media Audio and Video, Microsoft Corporation	-	-
DTCP	2005	DTCP Adopter Agreement, Digital Transmission Protection License Agreement	-	-
WMDRM-ND		Windows Media DRM for Network Devices, Windows Media Technologies	-	-



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Edition 2.0 2013-10

INTERNATIONAL STANDARD



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



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IEC 62481-3

Edition 2.0 2013-10

INTERNATIONAL STANDARD



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

INTERNATIONAL
ELECTROTECHNICAL
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**DIGITAL LIVING NETWORK ALLIANCE (DLNA) HOME
NETWORKED DEVICE INTEROPERABILITY GUIDELINES –****Part 3: Link protection****FOREWORD**

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International Standard IEC 62481-3 has been prepared technical area 9: Audio, video and multimedia applications for end-user network, by IEC technical committee 100: Audio, video and multimedia systems and equipment.

This second edition cancels and replaces the first edition published in 2010. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) includes variable play (trick mode) support;
- b) includes updates to resolve interoperability issues.

The text of this standard is based on the following documents:

CDV	Report on voting
100/1994/CDV	100/2082/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of IEC 62481 series, published under the general title *Digital living network alliance (DLNA) home networked device interoperability guidelines*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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INTRODUCTION

Consumers are acquiring, viewing, and managing an increasing amount of digital media (photos, music, and video) on devices in the Consumer Electronics (CE), mobile, and Personal Computer (PC) domains. As such, they want to conveniently enjoy the content, regardless of the source, across different devices and locations in the home. The digital home vision integrates the Internet, mobile, and broadcast networks through a seamless, interoperable network, which will provide a unique opportunity for manufacturers and consumers alike. In order to achieve this interoperability, a common set of industry design guidelines is needed that allows vendors to participate in a growing marketplace, leading to more innovation, simplicity, and value for consumers. This standard serves that purpose and provides vendors with the information needed to build interoperable networked platforms and devices for the digital home.

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

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 part of IEC 62481.

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 part of IEC 62481 reference existing technologies for Link Protection and provide mechanisms for interoperability between different implementations as well as integration with the DLNA architecture.

2 Normative references

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

IEC 62481-1:2013, *Digital Living Network Alliance (DLNA) home networked device interoperability guidelines – Part 1: Architecture and protocols*

IEC 62481-2:2013, *Digital Living Network Alliance (DLNA) home networked device interoperability guidelines – Part 2: DLNA media formats*

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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, *Information technology – UPnP Device Architecture – Part 3-10: Audio Video Device Control Protocol – Audio Video Transport Service*

ISO/IEC 29341-3-11, *Information technology – UPnP Device Architecture – Part 3-11: Audio Video Device Control Protocol – Connection Manager Service*

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<http://www.ietf.org/rfc/rfc3551.txt>

DTCP Volume 1 (informational version), *Digital Transmission Content Protection Specification Volume1*, 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), *DTCP Volume 1 Supplement E Mapping DTCP to IP*, Revision 1.1: February 28, 2005
http://www.dtcp.com/data/info_20050228 dtcp VISE 1p1.pdf

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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*

DTCP Adopter Agreement, *DTCP Adopter Agreement, Digital Transmission Protection License Agreement*, DTLA Digital Transmission Licensing Administrator, May 2005
<http://www.dtcp.com/>

WMDRM-ND, *Windows Media DRM for Network Devices, Windows Media Technologies*
<http://wmlicense.smdisp.net/licenserequest/default.asp>

RTP Payload format for WMV and WMA, *RTP Payload Format for Windows Media Audio and Video*, Microsoft Corporation
http://download.microsoft.com/download/5/5/a/55a7b886-b742-4613-8ea8-d8b8b5c27bbc/RTPPayloadFormat_for_WMAandWMV_v1.doc

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