

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Video surveillance systems for use in security applications –
Part 2-31: Live streaming and control based on web services**

**Systèmes de vidéosurveillance destinés à être utilisés dans les applications de
sécurité –
Partie 2-31: Transmission en continu en direct et contrôle basé sur les services
web**



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2019 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search - webstore.iec.ch/advsearchform

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

Electropedia - www.electropedia.org

The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

A propos de l'IEC

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications IEC

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

Recherche de publications IEC -

webstore.iec.ch/advsearchform

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études,...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

IEC Just Published - webstore.iec.ch/justpublished

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et une fois par mois par email.

Service Clients - webstore.iec.ch/csc

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: sales@iec.ch.

Electropedia - www.electropedia.org

Le premier dictionnaire d'électrotechnologie en ligne au monde, avec plus de 22 000 articles terminologiques en anglais et en français, ainsi que les termes équivalents dans 16 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

Glossaire IEC - std.iec.ch/glossary

67 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et Définitions des publications IEC parues depuis 2002. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Video surveillance systems for use in security applications –
Part 2-31: Live streaming and control based on web services**

**Systèmes de vidéosurveillance destinés à être utilisés dans les applications de
sécurité –
Partie 2-31: Transmission en continu en direct et contrôle basé sur les services
web**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 13.320

ISBN 978-2-8322-7035-6

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD.....	8
INTRODUCTION.....	10
1 Scope.....	11
2 Normative references	11
3 Terms and definitions	12
4 Overview	13
4.1 General.....	13
4.2 Device IO.....	13
4.3 Imaging configuration.....	13
4.4 Media configuration	13
4.4.1 Media profiles	13
4.4.2 Video source mode	16
4.5 Real-time streaming.....	16
4.6 PTZ Control	17
4.7 Analytics	18
4.8 Interfaces.....	20
5 Device IO service	20
5.1 General.....	20
5.2 VideoOutputs	20
5.2.1 General	20
5.2.2 GetVideoOutputs	20
5.3 VideoOutputConfiguration	21
5.3.1 GetVideoOutputConfiguration	21
5.3.2 SetVideoOutputConfiguration	21
5.3.3 GetVideoOutputConfigurationOptions	22
5.4 VideoSources	22
5.4.1 General	22
5.4.2 GetVideoSources.....	22
5.5 AudioOutputs	22
5.5.1 General	22
5.5.2 GetAudioOutputs	23
5.6 AudioSources	23
5.6.1 General	23
5.6.2 GetAudioSources.....	23
5.7 Capabilities.....	23
6 Media service	24
6.1 General.....	24
6.2 Media profile methods.....	25
6.2.1 Create media profile	25
6.2.2 Get media profiles	25
6.2.3 Add one or more configurations to a profile.....	26
6.2.4 Remove one or more configurations from a profile.....	27
6.2.5 Delete media profile.....	27
6.3 Media configurations.....	28
6.3.1 General	28
6.3.2 Video source configuration	28

6.3.3	Video encoder configuration	29
6.3.4	Audio source configuration	29
6.3.5	Audio encoder configuration	29
6.3.6	PTZ Configuration	29
6.3.7	Analytics configuration.....	29
6.3.8	Metadata configuration	30
6.3.9	Audio output configuration	30
6.3.10	Audio decoder configuration	31
6.4	Media Configuration Methods.....	31
6.4.1	General	31
6.4.2	Get configurations	31
6.4.3	Modify a configuration	32
6.4.4	Get configuration options.....	32
6.4.5	GetVideoEncoderInstances.....	33
6.5	GetStreamUri.....	34
6.6	GetSnapshotUri	35
6.7	Multicast	35
6.7.1	General	35
6.7.2	Start multicast streaming	36
6.7.3	Stop multicast streaming	36
6.8	SetSynchronizationPoint	37
6.9	Video source mode	37
6.9.1	General	37
6.9.2	GetVideoSourceModes	37
6.9.3	SetVideoSourceMode	38
6.10	OSD (on-screen display).....	38
6.10.1	General	38
6.10.2	CreateOSD	39
6.10.3	DeleteOSD	40
6.10.4	GetOSDs	40
6.10.5	SetOSD	41
6.10.6	GetOSDOptions.....	41
6.11	Privacy masks.....	42
6.11.1	General	42
6.11.2	CreateMask	43
6.11.3	DeleteMask	43
6.11.4	GetMasks	44
6.11.5	SetMask	44
6.11.6	GetMaskOptions	45
6.12	Capabilities.....	45
6.13	Events	46
6.13.1	ProfileChange.....	46
6.13.2	ConfigurationChange	46
6.13.3	ActiveConnections	47
6.14	Deviations of media service version 1	47
6.14.1	General	47
6.14.2	Profile management.....	47
6.14.3	Configuration listing.....	48
6.14.4	Privacy masks	48

7	Imaging service	48
7.1	General.....	48
7.2	Imaging settings.....	48
7.2.1	Parameters	48
7.2.2	GetImagingSettings	50
7.2.3	SetImagingSettings.....	51
7.2.4	GetOptions	51
7.3	Imaging Presets	52
7.3.1	General	52
7.3.2	GetPresets	52
7.3.3	GetCurrentPreset	52
7.3.4	SetCurrentPreset.....	53
7.4	Focus operations	54
7.4.1	Move	54
7.4.2	GetMoveOptions	54
7.4.3	Stop.....	55
7.4.4	GetImagingStatus	55
7.5	Capabilities	56
8	PTZ service	56
8.1	General.....	56
8.2	PTZ node	57
8.2.1	General	57
8.2.2	GetNodes	57
8.2.3	GetNode	57
8.3	PTZ configuration	58
8.3.1	General	58
8.3.2	GetConfigurations.....	59
8.3.3	GetConfiguration	59
8.3.4	GetConfigurationOptions	60
8.3.5	SetConfiguration.....	60
8.3.6	GetCompatibleConfigurations	61
8.4	Move operations	61
8.4.1	General	61
8.4.2	AbsoluteMove.....	61
8.4.3	RelativeMove.....	62
8.4.4	ContinuousMove.....	63
8.4.5	GeoMove	64
8.4.6	Stop.....	66
8.4.7	GetStatus	66
8.5	Preset operations.....	67
8.5.1	General	67
8.5.2	SetPreset	67
8.5.3	GetPresets	68
8.5.4	GotoPreset	69
8.5.5	RemovePreset.....	69
8.6	Home position operations	70
8.6.1	General	70
8.6.2	GotoHomePosition.....	70
8.6.3	SetHomePosition	71

8.7	Auxiliary operations	71
8.7.1	General	71
8.7.2	SendAuxiliaryCommand.....	71
8.8	Predefined PTZ Spaces	72
8.8.1	General	72
8.8.2	Absolute position spaces	72
8.8.3	Relative translation spaces	77
8.8.4	Continuous velocity spaces	78
8.8.5	Speed spaces.....	79
8.9	Preset tour operations.....	80
8.9.1	General	80
8.9.2	GetPresetTours	81
8.9.3	GetPresetTour.....	81
8.9.4	GetPresetTourOptions	82
8.9.5	CreatePresetTour	82
8.9.6	ModifyPresetTour	83
8.9.7	OperatePresetTour	83
8.9.8	RemovePresetTour.....	84
8.9.9	Preset tour parameters	85
8.10	Pan/tilt control direction configuration	86
8.11	Capabilities.....	87
8.12	Events	88
8.12.1	General	88
8.12.2	PTZ presets.....	88
8.12.3	PresetTours.....	88
9	Analytics service.....	89
9.1	General.....	89
9.2	Scene description interface.....	89
9.2.1	Overview	89
9.2.2	Frame-related content	89
9.2.3	Scene elements.....	92
9.3	Rule interface	99
9.3.1	General	99
9.3.2	Rule representation	100
9.3.3	Rule description language	100
9.3.4	Operations on rules	101
9.4	Analytics modules interface	104
9.4.1	General	104
9.4.2	Analytics module configuration	105
9.4.3	Analytics module description language	105
9.4.4	Operations on analytics modules	105
9.5	GetAnalyticsModuleOptions	108
9.6	Capabilities.....	109
9.7	Events – Audio Detected.....	109
10	Real-time streaming	110
10.1	General.....	110
10.2	Media stream protocol.....	110
10.2.1	Transport format.....	110
10.2.2	Media transport	111

10.2.3	Synchronization points.....	115
10.2.4	JPEG over RTP	116
10.3	Media control protocol.....	118
10.3.1	RTSP stream control	118
10.3.2	Keep-alive method for RTSP session.....	120
10.3.3	RTSP audio and video synchronization.....	121
10.3.4	RTSP session for a metadata stream.....	121
10.3.5	Multicast streaming.....	122
10.3.6	RTSP message example.....	122
10.3.7	RTSP over HTTP.....	123
10.4	Back channel connection	123
10.4.1	General	123
10.4.2	RTSP Require tag.....	123
10.4.3	Connection setup for a bi- directional connection.....	124
10.4.4	Describe example for a server without backchannel support:	124
10.4.5	Describe example for a server with ONVIF backchannel support:	124
10.4.6	Multicast streaming.....	126
10.5	Error handling.....	126
Annex A	(normative) Efficient XML Interchange (EXI)	127
Annex B	(normative) Lens description.....	128
Annex C	(informative) Specified rules	130
C.1	General.....	130
C.2	LineDetector	130
C.3	FieldDetector	130
C.4	LoiteringDetector	131
C.5	Declarative motion detector	132
C.6	Counting rule	133
C.7	Query rule.....	134
Annex D	(informative) Cell motion detection	135
D.1	Cell motion detector.....	135
D.2	Cell motion analytics engine	136
D.2.1	General	136
D.2.2	Module configuration	137
Annex E	(normative) Motion detection.....	139
Annex F	(normative) Schema files	141
F.1	Device IO.....	141
F.2	Imaging.....	156
F.3	Media.....	162
F.4	Media 2.....	199
F.5	PTZ	221
F.6	Analytics	234
F.7	Common schema	240
F.8	Streaming metadata schema.....	279
Bibliography	284
Figure 1	– A media profile.....	14
Figure 2	– Complete profile configuration.....	15
Figure 3	– Layer structure.....	16

Figure 4 – Analytics architecture	19
Figure 5 – Example with four OSD configurations	39
Figure 6 – Example of screen with mask and coordinate system	42
Figure 7 – Spherical pan/tilt position space in degrees for a camera mounted on the ceiling	74
Figure 8 – Example of changes of pan/tilt control direction by E-Flip and Reverse	87
Figure 9 – Default frame coordinate system	91
Figure 10 – RTP header	111
Figure 11 – RTCP sequence	114
Figure 12 – RTCP Sender Report	115
Figure 13 – Media synchronization	115
Figure 14 – RTP/JPEG packet structure	116
Figure 15 – Stream control	119
Figure 16 – Keep alive	121
Figure B.1 – Optical mapping of angle (α) via radius (R) to normalized x/y coordinates	128
Figure B.2 – Smooth mapping using B-splines	128
Figure B.3 – Compensation of vertical axis offset	129
Figure D.1 – CellLayout of an 8 × 6 CellMotionEngine	138
Table 1 – Referenced namespaces (with prefix)	20
Table 2 – Colourspace namespace values	97
Table 3 – Description of attributes of MotionInCells type	99
Table 4 – RTP header value	112
Table 5 – RTSP methods	120
Table A.1 – ONVIF defined EXI header settings	127
Table A.2 – ONVIF defined EXI configuration settings	127
Table C.1 – Loitering Detector rule configuration parameters	132
Table C.2 – Description of loitering event fields	132
Table C.3 – Declarative motion detector rule configuration parameters	133
Table C.4 – Description of declarative motion event fields	133
Table C.5 – Counting rule configuration parameters	134
Table C.6 – Description of counting event fields	134
Table C.7 – Query Rule configuration parameters	134
Table D.1 – Cell motion detector rule configuration parameters	136
Table D.2 – Description cell motion detected event fields	136
Table D.3 – Module configuration parameters	137
Table D.4 – Description of CellLayout fields	137
Table E.1 – Motion Region Detector Rule configuration parameters	139
Table E.2 – Motion region detector rule configuration options	140
Table E.3 – Description of the motion region detector event fields	140

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**VIDEO SURVEILLANCE SYSTEMS FOR
USE IN SECURITY APPLICATIONS –****Part 2-31: Live streaming and control
based on web services**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62676-2-31 has been prepared by IEC technical committee 79: Alarm and electronic security systems.

This first edition, together with IEC 60839-11-31 and IEC 62676-2-32, cancels and replaces IEC 62676-2-3:2013.

This edition includes the following significant technical changes with respect to IEC 62676-2-3:2013:

- a) addition of the Media2 service;
- b) additional methods for the imaging service;
- c) method duplicates from the device IO service have been removed;
- d) both the display and analytics device service are no more included.

This publication contains attached schema files. These files are intended to be used as a complement and do not form an integral part of the standard

The text of this International Standard is based on the following documents:

FDIS	Report on voting
79/620/FDIS	79/622/RVD

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

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

A list of all parts in the IEC 62676 series, published under the general title *Video surveillance systems for use in security applications*, can be found on the IEC website.

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

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

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

The goal of this document is to provide a fully interoperable network video implementation comprised of products from different network video vendors. This document describes the network video model, interfaces, data types and data exchange patterns. The document reuses existing relevant standards where available and introduces new specifications only where necessary to support the specific requirements for network video surveillance.

VIDEO SURVEILLANCE SYSTEMS FOR USE IN SECURITY APPLICATIONS –

Part 2-31: Live streaming and control based on web services

1 Scope

This document defines procedures for communication between network video clients and video transmitter devices. This new set of specifications makes it possible to build network video systems with devices and receivers from different manufacturers using common and well-defined interfaces. These interfaces cover functions such as media and imaging configuration, real-time streaming of audio and video, pan, tilt and zoom (PTZ) control as well as analytics.

The management and control interfaces defined in this document are described as web services. Annex F contains XML schema and Web Service Description Language (WSDL) definitions for the introduced network services.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60839-11-31, *Alarm and electronic security systems – Part 11-31: Electronic access control systems – Core interoperability protocol based on Web services*

ISO 12639, *Graphic technology – Prepress digital data exchange – Tag image file format for image technology (TIFF/IT)*

INTERNET ENGINEERING TASK FORCE (IETF). RFC 1952: *GZIP file format specification version 4.3* [online]. Edited by P. Deutsch. May 1996 [viewed 2019-01-08]. Available at <http://tools.ietf.org/html/rfc1952>

INTERNET ENGINEERING TASK FORCE (IETF). RFC 2326: *Real Time Streaming Protocol (RTSP)* [online]. Edited by H. Schulzrinne et al. April 1998 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc2326.txt>

INTERNET ENGINEERING TASK FORCE (IETF). RFC 2435: *RTP Payload Format for JPEG-compressed Video* [online]. Edited by L. Berc et al. October 1998 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc2435.txt>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 2818: *HTTP over TLS* [online]. Edited by E. Rescorla. May 2000 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc2818.txt>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 3016: *RTP Payload Format for MPEG-4 Audio/Visual Streams* [online]. Edited by Y. Kikuchi et al. November 2000 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc3016.txt>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 3550: *RTP: A Transport Protocol for Real-Time Applications* [online]. Edited by H. Schulzrinne et al. July 2003 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc3550.txt>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 3551: *RTP Profile for Audio and Video Conferences with Minimal Control* [online]. Edited by H. Schulzrinne et al. July 2003 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc3551.txt>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 3640: *RTP Payload Format for Transport of MPEG-4 Elementary Streams* [online]. Edited by J. van der Meer et al. November 2003 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc3640.txt>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 3984: *RTP Payload Format for H.264 Video* [online]. Edited by T. Stockhammer et al. February 2005 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc3984>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 4566: *SDP: Session Description Protocol* [online]. Edited by M. Handley et al. July 2006 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc4566.txt>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 6455: *The WebSocket Protocol* [online]. Edited by I. Fette et al. December 2011 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc6455.txt>

INTERNET ENGINEERING TASK FORCE (IETF), RFC 7798: *RTP Payload Format for High Efficiency Video Coding (HEVC)* [online]. Edited by Y.-K. Wang et al. March 2016 [viewed 2019-01-08]. Available at <http://www.ietf.org/rfc/rfc7798.txt>

Apple, *Tunneling QuickTime RTSP and RTP over HTTP*
Available at http://www.opensource.apple.com/source/QuickTimeStreamingServer/QuickTimeStreamingServer-412.42/Documentation/RTSP_Over_HTTP.pdf¹

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

media profile

profile that maps a video or an audio source or an audio output to a video or an audio encoder, an audio decoder configuration and PTZ and analytics configurations

¹ QuickTime is the trademark of a product supplied by Apple Inc. This information is given for the convenience of users of this document and does not constitute an endorsement by IEC of the product named. Equivalent products may be used if they can be shown to lead to the same results.