IEC 62379-2

Edition 1.0 2008-09

INTERNATIONAL STANDARD

Common control interface for networked digital audio and video products – Part 2: Audio

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE XC

ICS 33.160.01

ISBN 2-8318-9987-7

® Registered trademark of the International Electrotechnical Commission

CONTENTS

FOREWORD 4
INTRODUCTION 6
1 Scope 7
2 Normative references 7
3 Terms, definitions and abbreviations 7
3.1 Abbreviations 7
4 Audio format definitions 8
4.1 Audio signal format definitions 8
4.1.1 Audio parameters 8
4.1.2 Audio signal formats 9
4.2 Audio transport format definitions 12
4.3 Audio metadata format definitions 12
5 MIB definitions for audio blocks 13
5.1 General 13
5.2 Type definitions 13
5.2.1 Textual conventions 13
5.2.2 Sequences 15
5.3 Audio port and associated managed object type definitions 17
5.3.1 Generic port functionality 17
5.3.2 AES3 ancillary data 18
5.3.3 Phantom power 19
5.3.4 Audio locked to reference 19
5.4 Other audio block and associated managed object type definitions 20
5.4.1 Audio mixer blocks 20
5.4.2 Audio crosspoint blocks 23
5.4.3 Audio clip player blocks 26
5.4.4 Audio limiter blocks 29
5.4.5 Audio converter blocks 31
5.4.6 Audio level alarm blocks 32
6 Status broadcasts 34
6.1 General 34
6.2 Type definitions 34
6.2.1 Textual conventions 34
6.2.2 Sequences 34
6.3 Audio formats mapping 34
6.3.1 audioFormatsMapTable 35
6.3.2 audioFormatsMapEntry 35
6.3.3 afmNumber 35
6.3.4 afmFormat 35
6.4 Page formats 35
6.4.1 Audio port page 35
6.4.2 AES3 ancillary data page 35
6.4.3 Audio mixer page 36
6.4.4 Audio crosspoint page 36
6.4.5 Audio clip player page 37
6.4.6 Audio limiter page 37

6.4.7 Audio converter page 38
6.4.8 Audio level alarm page 38
6.5 Page groups 39
6.5.1 audioPorts 39
6.5.2 standardAudioBlocks 39
6.5.3 audioAlarms 40
Annex A (informative) Machine-readable audio format definitions 41
Annex B (informative) Machine-readable audio block definitions 56
Annex C (informative) Machine-readable status page group definitions 74
Annex D (informative) Machine-readable status page MIB definitions 75
Annex E (informative) Worked examples 77
Annex F (informative) Tree of example audio formats 86

Figure 1 – Audio port blocks 17
Figure 2 – Audio mixer block 21
Figure 3 – Audio crosspoint block 23
Figure 4 – Audio clip player block 26
Figure 5 – Audio limiter block 29
Figure 6 – Audio converter block 31
Figure 7 – Audio level alarm block 32

Table 1 – Managed objects for audio ports 17
Table 2 – Managed objects for AES3 ancillary data 18
Table 3 – Managed objects for phantom power 19
Table 4 – Managed objects for audio locked 20
Table 5 – Managed objects for audio mixer blocks 21
Table 6 – Managed objects for audio crosspoint blocks 23
Table 7 – Managed objects for audio clip player blocks 27
Table 8 – Managed objects for audio limiter blocks 30
Table 9 – Managed objects for audio converter blocks 31
Table 10 – Managed objects for audio level alarm blocks 33
Table 11 – Managed objects for audio format mappings 35
Table 12 – Status entries for audio port page 35
Table 13 – Status entries for AES3 ancillary data page 36
Table 14 – Status entries for audio mixer page 36
Table 15 – Status entries for audio crosspoint page 37
Table 16 – Status entries for audio clip player page 37
Table 17 – Status entries for audio limiter page 38
Table 18 – Status entries for audio converter page 38
Table 19 – Status entries for audio level alarm page 39

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMON CONTROL INTERFACE FOR NETWORKED DIGITAL AUDIO AND VIDEO PRODUCTS –

Part 2: Audio

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 provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
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 62379-2 has been prepared technical area 4: Digital system interfaces and protocols, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

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

FDIS	Report on voting
100/1405/FDIS	100/1445/RVD

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.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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.

INTRODUCTION

IEC 62379 specifies the common control interface, a protocol for managing equipment which conveys audio and/or video across digital networks.

This part of IEC 62379 specifies those aspects that are specific to audio equipment.

An introduction to the common control interface is given in IEC 62739-1.

COMMON CONTROL INTERFACE FOR NETWORKED DIGITAL AUDIO AND VIDEO PRODUCTS –

Part 2: Audio

1 Scope

This part of IEC 62379 specifies aspects of the common control interface of IEC 62379-1 that are specific to audio.

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.

AES3-2003, *AES standard for digital audio — Digital input-output interfacing — Serial transmission format for two-channel linearly represented digital audio data*

AES10-2003*, AES recommended practice for digital audio engineering – Serial multichannel audio digital interface (MADI)*

AES50-2005, *AES standard for digital audio engineering – High-resolution multi-channel audio interconnection (HRMAI)*

IEC 62379-1:2007, *Common control interface for networked audio and video products – Part 1: General*

ITU-T Recommendation G.711, *Pulse code modulation (PCM) of voice frequencies*

ITU-T Recommendation G.722, *7kHz audio-coding within 64 kbit/s*

ITU-T Recommendation J.41, *Characteristics of equipment for the coding of analogue high quality sound programme signals for transmission on 384 kbit/s channels*

ITU-T Recommendation J.57, *Transmission of digital studio quality sound signals over H1 channels*