



SLOVENSKI STANDARD
oSIST prEN IEC 62680-1-6:2019
01-januar-2019

Vmesniki univerzalnega serijskega vodila za prenos podatkov in napajanje - 1-6.
del: Skupne komponente - USB Audio 3.0 Tip naprave za osnovne funkcije

Universal serial bus interfaces for data and power - Part 1-6: Common components -
USB Audio 3.0 Device Class Definition Basic Functions

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN IEC 62680-1-6:2020](https://standards.iteh.ai/catalog/standards/sist/d388abb4-ab47-4c04-98a0-00d30461bba8/sist-en-iec-62680-1-6-2020)

Ta slovenski standard je istoveten z: **prEN IEC 62680-1-6:2018**

ICS:

35.200	Vmesniška in povezovalna oprema	Interface and interconnection equipment
--------	---------------------------------	-----------------------------------------

oSIST prEN IEC 62680-1-6:2019 **en,fr,de**



100/3158/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER: IEC 62680-1-6 ED1	
DATE OF CIRCULATION: 2018-11-23	CLOSING DATE FOR VOTING: 2019-02-15
SUPERSEDES DOCUMENTS:	

IEC TA 18 : MULTIMEDIA HOME SYSTEMS AND APPLICATIONS FOR END-USER NETWORKS	
SECRETARIAT: Japan	SECRETARY: Mr Keisuke Koide
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: <input type="checkbox"/> Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.
FUNCTIONS CONCERNED: <input type="checkbox"/> EMC <input type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input type="checkbox"/> SAFETY	
<input type="checkbox"/> SUBMITTED FOR CENELEC PARALLEL VOTING	<input checked="" type="checkbox"/> NOT SUBMITTED FOR CENELEC PARALLEL VOTING

This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

TITLE:

Universal serial bus interfaces for data and power - Part 1-6: Common components – USB Audio 3.0 Device Class Definition Basic Functions

PROPOSED STABILITY DATE: 2022

NOTE FROM TC/SC OFFICERS:

INTERNATIONAL ELECTROTECHNICAL COMMISSION

UNIVERSAL SERIAL BUS INTERFACES FOR DATA AND POWER

Part 1-6: Common components – USB Audio 3.0 Device Class Definition
Basic Functions

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 62680-1-6 has been prepared by technical area 18: Multimedia home systems and applications for end-user networks, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this standard was prepared by the USB Implementers Forum (USB-IF). The structure and editorial rules used in this publication reflect the practice of the organization which submitted it.

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

FDIS	Report on voting
XX/XX/FDIS	XX/XX/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.

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.

The National Committees are requested to note that for this document the stability date is

THIS TEXT IS INCLUDED FOR THE INFORMATION OF THE NATIONAL COMMITTEES AND WILL BE DELETED AT THE PUBLICATION STAGE.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN IEC 62680-1-6:2020

<https://standards.iteh.ai/catalog/standards/sist/d388abb4-ab47-4c04-98a0-60d5048fbba8/sist-en-iec-62680-1-6-2020>

INTRODUCTION

The IEC 62680 series is based on a series of specifications that were originally developed by the USB Implementers Forum (USB-IF). These specifications were submitted to the IEC under the auspices of a special agreement between the IEC and the USB-IF.

This standard is the USB-IF publication USB Device Class Definition for Basic Audio Functions Release 3.0.

The USB Implementers Forum, Inc.(USB-IF) is a non-profit corporation founded by the group of companies that developed the Universal Serial Bus specification. The USB-IF was formed to provide a support organization and forum for the advancement and adoption of Universal Serial Bus technology. The Forum facilitates the development of high-quality compatible USB peripherals (devices), and promotes the benefits of USB and the quality of products that have passed compliance testing.

ANY USB SPECIFICATIONS ARE PROVIDED TO YOU "AS IS, "WITH NO WARRANTIES WHATSOEVER, INCLUDING ANY WARRANTY OF MERCHANTABILITY, NON-INFRINGEMENT, OR FITNESS FOR ANY PARTICULAR PURPOSE. THE USB IMPLEMENTERS FORUM AND THE AUTHORS OF ANY USB SPECIFICATIONS DISCLAIM ALL LIABILITY, INCLUDING LIABILITY FOR INFRINGEMENT OF ANY PROPRIETARY RIGHTS, RELATING TO USE OR IMPLEMENTATION OR INFORMATION IN THIS SPECIFICATION.

THE PROVISION OF ANY USB SPECIFICATIONS TO YOU DOES NOT PROVIDE YOU WITH ANY LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS.

Entering into USB Adopters Agreements may, however, allow a signing company to participate in a reciprocal, RAND-Z licensing arrangement for compliant products. For more information, please see:

https://www.usb.org/documents_h.ai/catalog/standards/sist/d388abb4-ab47-4c04-98a0-60d5048fbb8/sist-en-iec-62680-1-6-2020

IEC DOES NOT TAKE ANY POSITION AS TO WHETHER IT IS ADVISABLE FOR YOU TO ENTER INTO ANY USB ADOPTERS AGREEMENTS OR TO PARTICIPATE IN THE USB IMPLEMENTERS FORUM."

UNIVERSAL SERIAL BUS DEVICE CLASS DEFINITION FOR BASIC AUDIO FUNCTIONS

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN IEC 62680-1-6:2020

<https://standards.iteh.ai/catalog/standards/sist/d388abb4-ab47-4c04-98a0-60d5048fbba8/sist-en-iec-62680-1-6-2020>

Release 3.0

September 22, 2016

SCOPE OF THIS RELEASE

This document is the Release 3.0 of this specification.

CONTRIBUTORS

Joe Scanlon	Advanced Micro Devices
Rhoads Hollowell	Apple Inc.
Girault Jones	Apple Inc.
Matthew X. Mora	Apple Inc.
Tzung-Dar Tsai	C-Media Electronics, Inc.
Brad Lambert	Cirrus Logic, Inc.
Dan Bogard	Conexant Systems, Inc.
Pete Burgers	DisplayLink (UK), Ltd.
David Roh	Dolby Laboratories, Inc.
Leng Ooi	Google, Inc.
Pierre-Louis Bossart	Intel Corporation
David Hines	Intel Corporation
Abdul Rahman Ismail (Co-Chair)	Intel Corporation
Devon Worrell	Intel Corporation
Chandrashekhar Rao	Logitech, Inc.
Terry Moore	MCCI Corporation
Alex Lin	MediaTek, Inc.
Bala Sivakumar	Microsoft Corporation
Geert Knapen (Co-Chair & Editor)	NXP Semiconductors
	PL Mobile Audio
	411 E. Plumeria drive
	San Jose, CA 95134, USA
	Phone: +1 (408) 518-5514
	E-mail: geert.knapen@nxp.com
James Goel	Qualcomm, Inc.
Andre Schevciw	Qualcomm, Inc.
Jin-Sheng Wang	Qualcomm, Inc.
Morten Christiansen	Synopsys

REVISION HISTORY

Rev.	Date	Filename	Description
1.0	Nov. 24, 09	BasicAudioDevice-10.pdf	Release 1.0
3.0	Sep. 22, 16	BasicAudioDevice30.pdf	Release 3.0

Copyright © 1997-2016 USB Implementers Forum, Inc.

All rights reserved.

INTELLECTUAL PROPERTY DISCLAIMER

A LICENSE IS HEREBY GRANTED TO REPRODUCE THIS SPECIFICATION FOR INTERNAL USE ONLY. NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, IS GRANTED OR INTENDED HEREBY.

USB-IF AND THE AUTHORS OF THIS SPECIFICATION EXPRESSLY DISCLAIM ALL LIABILITY FOR INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS RELATING TO IMPLEMENTATION OF INFORMATION IN THIS SPECIFICATION. USB-IF AND THE AUTHORS OF THIS SPECIFICATION ALSO DO NOT WARRANT OR REPRESENT THAT SUCH IMPLEMENTATION(S) WILL NOT INFRINGE THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS.

THIS SPECIFICATION IS PROVIDED “AS IS” AND WITH NO WARRANTIES, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE. ALL WARRANTIES ARE EXPRESSLY DISCLAIMED. USB-IF, ITS MEMBERS AND THE AUTHORS OF THIS SPECIFICATION PROVIDE NO WARRANTY OF MERCHANTABILITY, NO WARRANTY OF NON-INFRINGEMENT, NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, AND NO WARRANTY ARISING OUT OF ANY PROPOSAL, SPECIFICATION, OR SAMPLE.

IN NO EVENT WILL USB-IF, MEMBERS OR THE AUTHORS BE LIABLE TO ANOTHER FOR THE COST OF PROCURING SUBSTITUTE GOODS OR SERVICES, LOST PROFITS, LOSS OF USE, LOSS OF DATA OR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, OR SPECIAL DAMAGES, WHETHER UNDER CONTRACT, TORT, WARRANTY, OR OTHERWISE, ARISING IN ANY WAY OUT OF THE USE OF THIS SPECIFICATION, WHETHER OR NOT SUCH PARTY HAD ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

NOTE: VARIOUS USB-IF MEMBERS PARTICIPATED IN THE DRAFTING OF THIS SPECIFICATION. CERTAIN OF THESE MEMBERS MAY HAVE DECLINED TO ENTER INTO A SPECIFIC AGREEMENT LICENSING INTELLECTUAL PROPERTY RIGHTS THAT MAY BE INFRINGED IN THE IMPLEMENTATION OF THIS SPECIFICATION. PERSONS IMPLEMENT THIS SPECIFICATION AT THEIR OWN RISK.

Dolby™, AC-3™, Pro Logic™ and Dolby Surround™ are trademarks of Dolby Laboratories, Inc.

All other product names are trademarks, registered trademarks, or service marks of their respective owners.

Please send comments via electronic mail to audio-chair@usb.org

63	TABLE OF CONTENTS	
64	Scope of This Release.....	1
65	Contributors.....	1
66	Revision History	1
67	Table of Contents	3
68	List of Tables	5
69	List of Figures	6
70	1 Introduction	7
71	1.1 Scope.....	7
72	1.2 Purpose	7
73	1.3 Related Documents	7
74	1.4 Terms and Abbreviations	7
75	2 Management Overview.....	9
76	3 Classification	10
77	4 General Requirements	11
78	4.1 Host and Basic Audio Device Interoperability	11
79	4.2 BADD AudioStreaming Interfaces	11
80	4.2.1 USB Speeds.....	11
81	4.2.2 Burst Modes	11
82	4.2.3 Synchronization Type	11
83	4.2.4 Sampling Frequency & Bit Depth	11
84	4.2.5 Cluster Descriptors.....	11
85	4.3 Power Considerations	13
86	4.3.1 Power Domains	13
87	5 Topologies.....	14
88	5.1 BAOF Topology	14
89	5.2 BAIF Topology	14
90	5.3 BAIOF Topology	15
91	6 Descriptors	17
92	6.1 Standard Descriptors.....	17
93	6.2 Interface Descriptors.....	17
94	6.2.1 Interface Association Descriptor	17
95	6.2.2 AudioControl Interface Descriptors	17
96	6.2.3 AudioControl Endpoint Descriptors	24
97	6.2.4 AudioStreaming Interface Descriptors	25
98	6.3 String Descriptors.....	28
99	7 Requests.....	29
100	7.1.1 Standard Requests	29
101	7.1.2 Class-specific Requests.....	29
102	8 BADD Profiles	31

103	8.1	Generic I/O Profile.....	31
104	8.2	Headphone Profile	32
105	8.3	Speaker Profile	33
106	8.4	Microphone Profile	34
107	8.5	Headset Profile.....	34
108	8.6	Headset Adapter Profile	35
109	8.7	Speakerphone Profile	36
110			

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN IEC 62680-1-6:2020

<https://standards.iteh.ai/catalog/standards/sist/d388abb4-ab47-4c04-98a0-60d5048fbba8/sist-en-iec-62680-1-6-2020>