IEC 62680-1-5

Edition 1.0 2019-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Universal serial bus interfaces for data and power – Part 1-5: Common components – USB Audio 3.0 device class definition

Interfaces de bus universel en série pour les données et l'alimentation électrique – Partie 1-5: Composants communs – Définition de classes de dispositifs USB Audio 3.0

IEC 62680-1-5:2019-09(en-fr)

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UNIVERSAL SERIAL BUS INTERFACES FOR DATA AND POWER –

Part 1-5: Common components – USB Audio 3.0 device class definition

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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:

CDV	Report on voting
100/3157/CDV	100/3227/RVC

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.

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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 Audio Devices Release 3.0.

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UNIVERSAL SERIAL BUS
DEVICE CLASS DEFINITION
FOR
AUDIO DEVICES

Release 3.0

September 22, 2016

SCOPE OF THIS RELEASE

This document is the Release 3.0 of this Device Class Definition.

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1.0	Mar. 18, 98	Audio10.pdf	Release 1.0
2.0	May. 31, 06	Audio20 final.pdf	Release 2.0
3.0	Sep. 22, 16	Audio30.pdf	Release 3.0

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1.1 SCOPE

The Audio Device Class Definition applies to all devices or functions embedded in composite devices that are used to manipulate audio, voice, and sound-related functionality. This includes both audio data (analog and digital) and the functionality that is used to directly control the audio environment, such as Volume and Tone Control. The Audio Device Class does not include functionality to operate transport mechanisms that are related to the reproduction of audio data, such as tape transport mechanisms or CD-ROM drive control.

1.2 PURPOSE

The purpose of this document is to describe the minimum capabilities and characteristics an audio device shall support to comply with the USB. This document also provides recommendations for optional features.

1.3 RELATED DOCUMENTS

- *Universal Serial Bus Specification*, Revision 2.0 (referred to in this document as the *USB Specification*). In particular, see Chapter 5, “USB Data Flow Model” and Chapter 9, “USB Device Framework.”
- *Universal Serial Bus 3.1 Specification*, Revision 1.0 (referred to in this document as the *USB 3.1 Specification*). This document covers details specific to SuperSpeed and SuperSpeed+ devices.
- *Universal Serial Bus Device Class Definition for Audio Data Formats* (referred to in this document as USB Audio Data Formats).
- *Universal Serial Bus Device Class Definition for Terminal Types* (referred to in this document as USB Audio Terminal Types).
- ANSI S1.11-1986 standard.
- MPEG-1 standard ISO/IEC 111172-3 1993.
- MPEG-2 standard ISO/IEC 13818-3 Feb. 20, 1997.
- Digital Audio Compression Standard (AC-3), ATSC A/52A Aug. 20, 2001. (available from http://www.atsc.org/)
- ANSI/IEEE-754 floating-point standard.
- ISO/IEC 60958 International Standard: *Digital Audio Interface and Annexes.*
- ISO/IEC 61937 standard.

1.4 TERMS AND ABBREVIATIONS

This section defines terms used throughout this document. For additional terms that pertain to the Universal Serial Bus, see Chapter 2, “Terms and Abbreviations,” in the *USB Specification*.

ASRC	Acronym for Asynchronous Sampling Rate Conversion.
(Audio Channel) Cluster	Group of logical audio channels that carry tightly related synchronous audio information. A stereo audio stream is a typical example of a two-channel Cluster.
Audio Control Attribute	Parameter of an Audio Control. Examples are Current, Minimum, Maximum and Resolution attributes of a Volume Control.
Audio Control	Logical object that is used to manipulate a specific audio property. Examples are Volume Control, Mute Control, etc.
Audio data stream	Transport medium that can carry audio information.