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Gränssnitt för seriebuss för datakommunikation (USB) – Del 1-3: Gemensamma komponenter – Specifikation för kabel och anslutningsdon USB Type-C®

Universal serial bus interfaces for data and power –

Part 1-3: Common components –

USB Type-C® Cable and Connector Specification

Som svensk standard gäller europastandarden EN IEC 62680-1-3:2022. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 62680-1-3:2022.

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- **IEC 62680-1-3, Fifth edition, 2022 - Universal serial bus interfaces for data and power - Part 1-3: Common components - USB Type-C® Cable and Connector Specification**

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English Version

**Universal serial bus interfaces for data and power - Part 1-3:
Common components - USB Type-C(r) cable and connector
specification
(IEC 62680-1-3:2022)**

Interfaces de bus universel en série pour les données et
l'alimentation électrique - Partie 1-3: Composants communs
- Spécification des câbles et connecteurs USB Type-C(r)
(IEC 62680-1-3:2022)

Schnittstellen des Universellen Seriellen Busses für Daten
und Energie - Teil 1-3: Gemeinsame Bauteile - Festlegung
für USB-Typ-C(r)-Kabel und -Steckverbinder
(IEC 62680-1-3:2022)

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Comité Européen de Normalisation Electrotechnique
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 100/3715/CDV, future edition 5 of IEC 62680-1-3, prepared by IEC/TC 100 "Audio, video and multimedia systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62680-1-3:2022.

The following dates are fixed:

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2025-10-10

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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Universal serial bus interfaces for data and power –
Part 1-3: Common components – USB Type-C® Cable and Connector
Specification**

**Interfaces de bus universel en série pour les données et l'alimentation
électrique –
Partie 1-3: Composants communs – Spécification des câbles et connecteurs
USB Type-C®**

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UNIVERSAL SERIAL BUS INTERFACES FOR DATA AND POWER –

Part 1-3: Common components – USB Type-C® Cable and Connector Specification

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International Standard IEC 62680-1-3 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:

Draft	Report on voting
100/3715/CDV	100/3762/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.

A list of all parts in the IEC 62680 series, published under the general title *Universal serial bus interfaces for data and power*, 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

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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 Universal Serial Bus Type-C Cable and Connector Specification Revision 2.0.

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Universal Serial Bus Type-C Cable and Connector Specification

**Release 2.1
May 2021**

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Tyco Electronics Corp. (TE Connectivity Ltd.)	Max Chao Robert E. Cid Calvin Feng Kengo Ijiro Eiji Ikematsu Joan Leu Clark Li	Mike Lockyer Jeff Mason Takeshi Nakashima Luis A. Navarro Masako Saito Yoshiaki Sakuma Gavin Shih	Hiroshi Shirai Hidenori Taguchi Nathan Tracy Bernard Vetten Ryan Yu Noah Zhang Sjoerd Zwartkruis
UL LLC	Leo Chung Michael Hu Dylan Su	Henry Tsou Paul Vanderlaan Eric Wall	Lance Yang Chien-Wei Yeh
Unigraf OY	Steven Chen	Sergey Grushin	
Varjo Technologies	Kai Inha		
Ventev Mobile	Brad Cox	Colin Vose	
VIA Technologies Inc.	Terrance Shih	Jay Tseng	Fong-Jim Wang
Weltrend Semiconductor	Hung Chiang Jeng Cheng Liu	Wayne Lo Ho Wen Tsai	Eric Wu
Western Digital, HGST	Larry McMillan		
Xiaomi Communications Co., Ltd.	Xiaoxing Yang	Juejia Zhou	

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Fairchild Semiconductor	Korea Electric Terminal	Semtech Corporation
Fujitsu Ltd.	Marvell Semiconductor	Silicon Image
Industrial Technology Research Institute (ITRI)	Motorola Mobility LLC	SMK Corporation
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Revision	Date	Description
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1.1	April 3, 2015	Reprint release including incorporation of all approved ECNs as of the revision date plus editorial clean-up.
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2.1	May 2021	New release primarily for enabling Extended Power Range (EPR) and defining EPR cables aligning with USB Power Delivery Specification R3.1 V1.0. Also includes incorporation of all approved ECNs as the revision date plus editorial clean-up.

1 Introduction

With the continued success of the USB interface, there exists a need to adapt USB technology to serve newer computing platforms and devices as they trend toward smaller, thinner and lighter form-factors. Many of these newer platforms and devices are reaching a point where existing USB receptacles and plugs are inhibiting innovation, especially given the relatively large size and internal volume constraints of the Standard-A and Standard-B versions of USB connectors. Additionally, as platform usage models have evolved, usability and robustness requirements have advanced and the existing set of USB connectors were not originally designed for some of these newer requirements. This specification is to establish a new USB connector ecosystem that addresses the evolving needs of platforms and devices while retaining all of the functional benefits of USB that form the basis for this most popular of computing device interconnects.

1.1 Purpose

This specification defines the USB Type-C® receptacles, plug and cables.

The USB Type-C Cable and Connector Specification is guided by the following principles:

- Enable new and exciting host and device form-factors where size, industrial design and style are important parameters
- Work seamlessly with existing USB host and device silicon solutions
- Enhance ease of use for connecting USB devices with a focus on minimizing user confusion for plug and cable orientation

The USB Type-C Cable and Connector Specification defines a new receptacle, plug, cable and detection mechanisms that are compatible with existing USB interface electrical and functional specifications. This specification covers the following aspects that are needed to produce and use this new USB cable/connector solution in newer platforms and devices, and that interoperate with existing platforms and devices:

- USB Type-C receptacles, including electro-mechanical definition and performance requirements
- USB Type-C plugs and cable assemblies, including electro-mechanical definition and performance requirements
- USB Type-C to legacy cable assemblies and adapters
- USB Type-C-based device detection and interface configuration, including support for legacy connections
- USB Power Delivery optimized for the USB Type-C connector

The USB Type-C Cable and Connector Specification defines a standardized mechanism that supports [Alternate Modes](#), such as repurposing the connector for docking-specific applications.

1.2 Scope

This specification is intended as a supplement to the existing [USB 2.0](#), [USB 3.2](#), [USB4™](#) and [USB Power Delivery](#) specifications. It addresses only the elements required to implement and support the USB Type-C receptacles, plugs and cables.

Normative information is provided to allow interoperability of components designed to this specification. Informative information, when provided, may illustrate possible design implementations.

1.3 Related Documents

USB	<i>Universal Serial Bus Revision 2.0 Specification</i>
2.0	This includes the entire document release package.

- USB 3.2** *Universal Serial Bus Revision 3.2 Specification*
This includes the entire document release package.
USB 3.1 Legacy Cable and Connector Specification, Revision 1.0
- USB4** *USB4™ Specification, Version 1.0, August 2019*
(including posted errata and ECNs)
- TBT3** Chapter 13 of *USB4 Specification, Version 1.0, August 2019*
- USB PD** *USB Power Delivery Specification, Revision 2.0, Version 1.3, January 12, 2017*
USB Power Delivery Specification, Revision 3.1, Version 1.0, May 2021
(including posted errata and ECNs)
- USB BB** *USB Billboard Device Class Specification, Revision 1.2.2, January 29, 2021*
- USB BC** *Battery Charging Specification, Revision 1.2 (including errata and ECNs through March 15, 2012), March 15, 2012*
- DP AM** *DisplayPort™ Alt Mode on USB Type-C Standard, Version 2.0, 12 March 2020*

All USB-specific documents are available for download at <http://www.usb.org/documents>. The DisplayPort Alt Mode specification is available from VESA (<http://www.vesa.org>).