

INTERNATIONAL STANDARD



Universal serial bus interfaces for data and power –
Part 1-3: Universal Serial Bus interfaces – Common components –
USB Type-C™ cable and connector specification



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

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
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Part 1-3: Universal Serial Bus interfaces – Common components –
USB Type-C™ cable and connector specification**

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**Part 1-3: Universal Serial Bus interfaces –
Common components – USB Type-C™
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The text of this standard is based on the following documents:

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Universal Serial Bus Type-C Cable and Connector Specification

**Revision 1.1
April 3, 2015**

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Specification Work Group Chairs / Specification Editors

Intel Corporation
(USB 3.0 Promoter
company)

Seagate

Yun Ling – Mechanical WG co-chair, Mechanical Chapter Co-editor
Bob Dunstan – Functional WG co-chair, Specification Co-author
Brad Saunders – Plenary/Functional WG chair, Specification Co-author

Alvin Cox, Mechanical WG co-chair, Mechanical Chapter Co-editor

Specification Work Group Contributors

Advanced-Connectek, Inc. (ACON)	Glen Chandler	Vicky Chuang	Alan Tsai
	Jeff Chien	Aven Kao	Stephen Yang
	Lee (Dick Lee) Ching	Danny Liao	
	Conrad Choy	Alan MacDougall	
Advanced Micro Devices	Steve Capezza	Walter Fry	Will Harris
Agilent Technologies, Inc.	James Choate		
Apple	Mahmoud Amini	William Ferry	Nathan Ng
	Sree Anantharaman	Zheng Gao	James Orr
	Paul Baker	Girault Jones	Keith Porthouse
	Jason Chung	Keong Kam	Sascha Tietz
	David Conroy	Min Kim	Colin Whitby-Stevens
	Bill Cornelius	Chris Ligtenberg	Dennis Yarak
Cypress Semiconductor	Mark Fu	Anup Nayak	Sanjay Sancheti
	Rushil Kadakia	Jagadeesan Raj	Subu Sankaran
Dell	Mohammed Hijazi	Sean O'Neal	Thomas Voor
	David Meyers	Ernesto Ramirez	
DisplayLink (UK) Ltd.	Pete Burgers	Richard Petrie	
Electronics Testing Center, Taiwan	Sophia Liu		
Foxconn	Asroc Chen	Chien-Ping Kao	Pei Tsao
	Allen Cheng	Ji Li	AJ Yang
	Jason Chou	Ann Liu	Yuan Zhang
	Edmond Choy	Terry Little	Jessica Zheng
	Bob Hall	Steve Sedio	Andy Yao
	Robert Chen	Armando Lee	Steve Tsai
Foxlink/Cheng Uei Precision Industry Co., Ltd.	Sunny Chou	Dennis Lee	Wen Yang
	Carrie Chuang	Justin Lin	Wiley Yang
	Wen-Chuan Hsu	Tse Wu Ting	Junjie Yu
	Alex Hsue		
	Joshua Boilard	Nithya Jagannathan	David Schneider
Google	Jim Guerin	Lawrence Lam	Ken Wu
	Jeffrey Hayashida	Ingrid Lin	
	Mark Hayter	Adam Rodriguez	
Granite River Labs	Mike Engbretson	Johnson Tan	
Hewlett Packard (USB 3.0 Promoter company)	Alan Berkema	Michael Krause	Linden McClure
	Robin Castell	Jim Mann	Mike Pescetto

Hirose Electric Co., Ltd.	Jeremy Buan William MacKillop	Gourgen Oganessyan	Sid Tono
Intel Corporation (USB 3.0 Promoter company)	Dave Ackelson Mike Bell Kuan-Yu Chen Hengju Cheng Bob Dunstan Paul Durley Howard Heck Hao-Han Hsu Abdul (Rahman) Ismail	James Jaussi Luke Johnson Jerzy Kolinski Christine Krause Yun Ling Xiang Li Guobin Liu Steve McGowan	Chee Lim Nge Sridharan Ranganathan Brad Saunders Amit Srivastava Ron Swartz Karthi Vadivelu Rafal Wielicki
Japan Aviation Electronics Industry Ltd. (JAE)	Kenji Hagiwara Masaki Kimura Toshio Masumoto Joe Motojima Ron Muir Tadashi Okubo Kazuhiro Saito	Kimiaki Saito Yuichi Saito Mark Saubert Toshio Shimoyama Tatsuya Shioda Atsuo Tago Masaaki Takaku	Jussi Takaneva Tomohiko Tamada Kentaro Toda Kouhei Ueda Takakazu Usami Masahide Watanabe Youhei Yokoyama
JPC/Main Super Inc.	Sam Tseng	Ray Yang	
LeCroy Corporation	Daniel H. Jacobs		
Lenovo	Rob Bowser Tomoki Harada	Wei Lie	Howard Locker
Lotes Co., Ltd.	Ariel Delos Reyes Ernest Han Mark Ho	Regina Liu-Hwang Max Lo Charles Kaun	JinYi Tu Jason Yang
LSI Corporation	Dave Thompson		
Luxshare-ICT	Josue Castillo Daniel Chen Lisen Chen	CY Hsu Alan Kinningham John Lin	Stone Lin Pat Young
MegaChips Corporation	Alan Kobayashi		
Microchip (SMSC)	Josh Averyt Mark Bohm	Donald Perkins	Mohammed Rahman
Microsoft Corporation (USB 3.0 Promoter company)	Randy Aull Fred Bhesania Anthony Chen Marty Evans Vivek Gupta Robbie Harris	Robert Hollyer Kai Inha Jayson Kastens Andrea Keating Eric Lee	Ivan McCracken Toby Nixon Gene Obie Srivatsan Ravindran David Voth
MQP Electronics Ltd.	Sten Carlsen	Pat Crowe	
Nokia Corporation	Daniel Gratiot Pekka Leinonen	Samuli Makinen Pekka Talmola	Timo Toivola Panu Ylihaavisto
NXP Semiconductors	Vijendra Kuroodi	Guru Prasad	
Renesas Electronics Corp. (USB 3.0 Promoter company)	Nobuo Furuya	Philip Leung	Kiichi Muto

Rohm Co., Ltd.	Mark Aldering	Arun Kumar	Takashi Sato
	Kris Bahar	Chris Lin	Hiroshi Yoshimura
	Yusuke Kondo		
Samsung Electronics Co., Ltd.	Soondo Kim	Jagoun Koo	Jun Bum Lee
	Woonki Kim	Cheolho Lee	
Seagate	Alvin Cox	Tom Skaar	Dan Smith
	Tony Priborsky		
STMicroelectronics (USB 3.0 Promoter company)	Nicolas Florenchie	Christophe Lorin	Federico Musarra
	Joel Huloux	Patrizia Milazzo	Pascal Legrand
Tektronics, Inc.	Randy White		
Texas Instruments (USB 3.0 Promoter company)	Jawaid Ahmad	Win Maung	Anwar Sadat
	Richard Hubbard	Lauren Moore	Sue Vining
	Scott Jackson	Martin Patoka	Deric Waters
	Yoon Lee	Brian Quach	
	Grant Ley	Wes Ray	
Tyco Electronics Corp. (TE Connectivity Ltd.)	Max Chao	Jim McGrath	Scott Shuey
	Robert E. Cid	Takeshi Nakashima	Hidenori Taguchi
	Kengo Ijiro	Luis A. Navarro	Bernard Vetten
	Eiji Ikematsu	Masako Saito	Ryan Yu
	Joan Leu	Yoshiaki Sakuma	Sjoerd Zwartkruis
	Clark Li	Gavin Shih	
	Mike Lockyer	Hiroshi Shirai	
VIA Technologies Inc.	Terrance Shih	Jay Tseng	Fong-Jim Wang

Pre-Release Draft Industry Reviewing Companies That Provided Feedback

Aces	Johnson Components & Equipment Co., Ltd.	Parade Technology
Allion Labs, Inc.		Pericom
Analogix Semiconductor	Joinsoon Electronics Mfg. Co. Ltd.	Qualcomm
BizLink International Corp.	JST Mfg. Co., Ltd.	Semtech Corporation
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Fujitsu Ltd.	Newnex Technology Corp.	Sony Corporation
Industrial Technology Research Institute (ITRI)	NXP Semiconductors	Sumitomo Electric Industries
	PalCONN/PalNova (Palpilot International Corp.)	Toshiba Corporation

Revision History

Revision	Date	Description
1.0	August 11, 2014	Initial Release
1.1	April 3, 2015	Reprint release including incorporation of all approved ECNs as of 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 3.1](#) 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.