IEC 62680-1-2

Edition 4.0 2019-12

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Universal serial bus interfaces for data and power
Part 1-2: Common components – USB Power Delivery specification

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Interfaces de bus universel en série pour les données et l'alimentation électrique
Partie 1-2: Composants communs – Spécification de l'alimentation électrique par port USB

IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/c3721706-a2a2-4bf1-ac65-4bd01f8b5573/iec-62680-1-2-2019

IEC 62680-1-2:2019-12(en-fr)

THIS PUBLICATION IS COPYRIGHT PROTECTED
Copyright © 2018 USB-IF

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from IEC, or USB-IF at the respective address given below. Any questions about USB-IF copyright should be addressed to the USB-IF. Enquiries about obtaining additional rights to this publication and other information requests should be addressed to the IEC or your local IEC member National Committee.

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland
Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

USB Implementers Forum, Inc.
3855 S.W. 153rd Drive
Beaverton, OR 97003
United States of America
Tel. +1 503-619-0426
Admin@usb.org
www.usb.org

About the IEC
The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications
The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search - webstore.iec.ch/advsearchform
The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,…). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished
Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc
If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

Electropedia - www.electropedia.org
The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary
67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/c3721706-a2a2-4bf1-ac65-4bd01f8b5573/iec-62680-1-2-2019

IEC 62680-1-2

Edition 4.0 2019-12

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Universal serial bus interfaces for data and power
Part 1-2: Common components – USB Power Delivery specification

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Interfaces de bus universel en série pour les données et l'alimentation électrique
Partie 1-2: Composants communs – Spécification de l'alimentation électrique par port USB

IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/...
4bd01f8b5573/iec-62680-1-2-2019

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 29.220; 33.120; 35.200 ISBN 978-2-8322-7646-4

Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

® Registered trademark of the International Electrotechnical Commission
Marque déposée de la Commission Electrotechnique Internationale

INTERNATIONAL ELECTROTECHNICAL COMMISSION

UNIVERSAL SERIAL BUS INTERFACES FOR DATA AND POWER

Part 1-2: Common components – USB Power Delivery specification

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 62680-1-2 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:

CDV	Report on voting
100/3189/CDV	100/3251/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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/c3721706-a2a2-4bf1-ac65-4bd01f8b5573/iec-62680-1-2-2019

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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/c3721706-a2a2-4bf1-ac65-4bd01f8b5573/iec-62680-1-2-2019

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 Universal Serial Bus Power Delivery Specification Revision 3.0, Version 1.2.

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 SPECIFICAITON.

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

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."

iTeh STANDARD PREVIEW
(standards.iteh.ai)
IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/c570170f-ea2a-42d1-ac65-4bd01f8b5573/iec-62680-1-2-2019

Universal Serial Bus
Power Delivery Specification

Revision: ***3.0***
Version: ***1.2***
Release date: ***21 June 2018***

iTeh STANDARD PREVIEW
(standards.iteh.ai)
IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/c3721706-a2a2-4bf1-ac65-4bd01f8b5573/iec-62680-1-2-2019

LIMITED COPYRIGHT LICENSE

THE USB 3.0 PROMOTERS GRANT A CONDITIONAL COPYRIGHT LICENSE UNDER THE COPYRIGHTS EMBODIED IN THE USB POWER DELIVERY SPECIFICATION TO USE AND REPRODUCE THE SPECIFICATION FOR THE SOLE PURPOSE OF, AND SOLELY TO THE EXTENT NECESSARY FOR, EVALUATING WHETHER TO IMPLEMENT THE SPECIFICATION IN PRODUCTS THAT WOULD COMPLY WITH THE SPECIFICATION. WITHOUT LIMITING THE FOREGOING, USE THE OF SPECIFICATION FOR THE PURPOSE OF FILING OR MODIFYING ANY PATENT APPLICATION TO TARGET THE SPECIFICATION OR USB COMPLIANT PRODUCTS IS NOT AUTHORIZED. EXCEPT FOR THIS EXPRESS COPYRIGHT LICENSE, NO OTHER RIGHTS OR LICENSES ARE GRANTED, INCLUDING WITHOUT LIMITATION ANY PATENT LICENSES. IN ORDER TO OBTAIN ANY ADDITIONALY INTELLECTUAL PROPERTY LICENSES OR LICENSING COMMITMENTS ASSOCIATED WITH THE SPECIFICATION A PARTY MUST EXECUTE THE USB 3.0 ADOPTERS AGREEMENT. NOTE: BY USING THE SPECIFICATION, YOU ACCEPT THESE LICENSE TERMS ON YOUR OWN BEHALF AND, IN THE CASE WHERE YOU ARE DOING THIS AS AN EMPLOYEE, ON BEHALF OF YOUR EMPLOYER.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

INTELLECTUAL PROPERTY DISCLAIMER

IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/c3721706-a2a2-4bf1-ac65-40d0f1805373/iec-62680-1-2-2019

THIS SPECIFICATION IS PROVIDED TO YOU "AS IS" WITH NO WARRANTIES WHATSOEVER, INCLUDING ANY WARRANTY OF MERCHANTABILITY, NON-INFRINGEMENT, OR FITNESS FOR ANY PARTICULAR PURPOSE. THE AUTHORS OF THIS SPECIFICATION DISCLAIM ALL LIABILITY, INCLUDING LIABILITY FOR INFRINGEMENT OF ANY PROPRIETARY RIGHTS, RELATING TO USE OR IMPLEMENTATION OF INFORMATION IN THIS SPECIFICATION. THE PROVISION OF THIS SPECIFICATION TO YOU DOES NOT PROVIDE YOU WITH ANY LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS.

Please send comments via electronic mail to techsup@usb.org

For industry information, refer to the USB Implementers Forum web page at http://www.usb.org

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

Copyright © 2010-2018, USB 3.0 Promoter Group: Apple Inc., Hewlett-Packard Inc., Intel Corporation, Microsoft Corporation, Renesas, STMicroelectronics, and Texas Instruments.

All rights reserved.

Chairs

Alvin Cox	Cabling Sub-Chair
Bob Dunstan	Specification Chair/Protocol Subgroup Chair
Deric Waters	PHY Chair
Ed Berrios	Power Supply Chair
Rahman Ismail	System Policy Chair
Richard Petrie	Specification Chair/Device Policy Chair

Editors

Bob Dunstan

Richard Petrie

Contributors

iTeh STANDARD PREVIEW
(standards.iteh.ai)
IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/c3721706-a2a2-4bf1-ac65-4bd01f8b5573/iec-62680-1-2-2019

Charles Wang	ACON, Advanced-Connectek, Inc.
Conrad Choy	ACON, Advanced-Connectek, Inc.
Dennis Chuang	ACON, Advanced-Connectek, Inc.
Steve Sedio	ACON, Advanced-Connectek, Inc.
Sunney Yang	ACON, Advanced-Connectek, Inc.
Vicky Chuang	ACON, Advanced-Connectek, Inc.
Joseph Scanlon	Advanced Micro Devices
Caspar Lin	Allion Labs, Inc.
Casper Lee	Allion Labs, Inc.
Danny Shih	Allion Labs, Inc.
Howard Chang	Allion Labs, Inc.
Greg Stewart	Analogix Semiconductor, Inc.
Mehran Badii	Analogix Semiconductor, Inc.
Alexei Kosut	Apple
Bill Cornelius	Apple
Carlos Colderon	Apple
Chris Uiterwijk	Apple
Colin Whitby-Strevens	Apple
Corey Axelowitz	Apple
Corey Lange	Apple
Dave Conroy	Apple
David Sekowski	Apple
Girault Jones	Apple
James Orr	Apple
Jason Chung	Apple
Jay Kim	Apple
Jeff Wilcox	Apple
Jennifer Tsai	Apple
Karl Bowers	Apple
Keith Porthouse	Apple
Kevin Hsiue	Apple
Matt Mora	Apple
Paul Baker	Apple
Reese Schreiber	Apple
Ruchi Chaturvedi	Apple
Sameer Kelkar	Apple
Sasha Tietz	Apple
Scott Jackson	Apple
Sree Raman	Apple
William Ferry	Apple
Zaki Moussaoui	Apple
Jeff Liu	ASMedia Technology Inc.
Kuo Lung Li	ASMedia Technology Inc.
Ming-Wei Hsu	ASMedia Technology Inc.
PS Tseng	ASMedia Technology Inc.
Sam Tzeng	ASMedia Technology Inc.
Thomas Hsu	ASMedia Technology Inc.
Weikao Chang	ASMedia Technology Inc.
Yang Cheng	ASMedia Technology Inc.
Shawn Meng	Bizlink Technology Inc.
Bernard Shyu	Bizlink Technology, Inc.
Eric Wu	Bizlink Technology, Inc.
Morphy Hsieh	Bizlink Technology, Inc.
Sean O'Neal	Bizlink Technology, Inc.
Tiffany Hsiao	Bizlink Technology, Inc.
Weichung Ooi	Bizlink Technology, Inc.
Rahul Bhushan	Broadcom Corp.
Asila nahas	Cadence Design Systems, Inc.
Claire Ying	Cadence Design Systems, Inc.
Jie min	Cadence Design Systems, Inc.
Mark Summers	Cadence Design Systems, Inc.
Michal Staworko	Cadence Design Systems, Inc.
Sathish Kumar Ganesan	Cadence Design Systems, Inc.
Alessandro Ingrassia	Canova Tech
Andrea Colognese	Canova Tech
Antonio Orzelli	Canova Tech
Davide Ghedin	Canova Tech
Matteo Casalin	Canova Tech
Michael Marioli	Canova Tech
Nicola Scantamburlo	Canova Tech
Paolo Pilla	Canova Tech
Yi-Feng Lin	Canyon Semiconductor
YuHung Lin	Canyon Semiconductor
David Tsai	Chrontel, Inc.
Anshul Gulati	Cypress Semiconductor
Anup Nayak	Cypress Semiconductor
Benjamin Kropf	Cypress Semiconductor
Dhanraj Rajput	Cypress Semiconductor
Ganesh Subramaniam	Cypress Semiconductor
Jagadeesan Raj	Cypress Semiconductor
Junjie cui	Cypress Semiconductor
Manu Kumar	Cypress Semiconductor
Muthu M	Cypress Semiconductor
Nicholas Bodnaruk	Cypress Semiconductor
Pradeep Bajpai	Cypress Semiconductor
Rajaram R	Cypress Semiconductor
Rama Vakkantula	Cypress Semiconductor
Rushil Kadakia	Cypress Semiconductor
Simon Nguyen	Cypress Semiconductor
Steven Wong	Cypress Semiconductor
Subu Sankaran	Cypress Semiconductor
Sumeet Gupta	Cypress Semiconductor
Tejender Sheoran	Cypress Semiconductor
Venkat Mandagulathar	Cypress Semiconductor
Xiaofeng Shen	Cypress Semiconductor
Zeng Wei	Cypress Semiconductor
Adolfo Montero	Dell Inc.
Bruce Montag	Dell Inc.
Gary Verdun	Dell Inc.
Merle Wood	Dell Inc.
Mohammed Hijazi	Dell Inc.
Siddhartha Reddy	Dell Inc.
Bindhu Vasu	Dialog Semiconductor (UK) Ltd
Chanchal Gupta	Dialog Semiconductor (UK) Ltd
Dipti Baheti	Dialog Semiconductor (UK) Ltd
Duc Doan	Dialog Semiconductor (UK) Ltd
Holger Petersen	Dialog Semiconductor (UK) Ltd
Jianming Yao	Dialog Semiconductor (UK) Ltd
John Shi	Dialog Semiconductor (UK) Ltd
KE Hong	Dialog Semiconductor (UK) Ltd
Kevin Mori	Dialog Semiconductor (UK) Ltd
Larry Ping	Dialog Semiconductor (UK) Ltd
Mengfei Liu	Dialog Semiconductor (UK) Ltd
Scott Brown	Dialog Semiconductor (UK) Ltd
Yimin Chen	Dialog Semiconductor (UK) Ltd
Yong Li	Dialog Semiconductor (UK) Ltd
Dan Ellis	DisplayLink (UK) Ltd.
Jason Young	DisplayLink (UK) Ltd.
Kevin Jacobs	DisplayLink (UK) Ltd.
Paulo Alcobia	DisplayLink (UK) Ltd.
Peter Burgers	DisplayLink (UK) Ltd.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/e3721706-a2a2-40f1-ac63-4bd01f8b5573/iec-62680-1-2-2019

Richard Petrie	DisplayLink (UK) Ltd.
Abel Astley	Ellisys
Chuck Trefts	Ellisys
Emmanuel Durin	Ellisys
Mario Pasquali	Ellisys
Tim Wei	Ellisys
Chien-Cheng Kuo	Etron Technology, Inc.
Jack Yang	Etron Technology, Inc.
Richard Crisp	Etron Technology, Inc.
Shyanjia Chen	Etron Technology, Inc.
TsungTa Lu	Etron Technology, Inc.
Christian Klein	Fairchild Semiconductor
Oscar Freitas	Fairchild Semiconductor
Souhib Harb	Fairchild Semiconductor
Amanda Ying	Feature Integration Technology Inc.
Jacky Chan	Feature Integration Technology Inc.
Kenny Hsieh	Feature Integration Technology Inc.
KungAn Lin	Feature Integration Technology Inc.
Paul Yang	Feature Integration Technology Inc.
su Jaden	Feature Integration Technology Inc.
Yu-Lin Chu	Feature Integration Technology Inc.
Yulin Lan	Feature Integration Technology Inc.
AJ Yang	Foxconn / Hon Hai
Fred Fons	Foxconn / Hon Hai
Jie zheng	Foxconn / Hon Hai
Steve Sedio	Foxconn / Hon Hai
Terry Little	Foxconn / Hon Hai
Bob McVay	Fresco Logic Inc.
Christopher Meyers	Fresco Logic Inc.
Dian Kurniawan	Fresco Logic Inc.
Tom Burton	Fresco Logic Inc.
Adam Rodriguez	Google Inc.
Alec Berg	Google Inc.
Dave Bernard	Google Inc.
David Schneider	Google Inc.
Jim Guerin	Google Inc.
Juan Fantin	Google Inc.
Ken Wu	Google Inc.
Mark Hayter	Google Inc.
Nithya Jagannathan	Google Inc.
Srikanth Lakshmikanthan	Google Inc.
Todd Broch	Google Inc.
Toshak Singhal	Google Inc.
Vincent Palatin	Google Inc.
Xuelin Wu	Google Inc.
Alan Kinningham	Granite River Labs
Balamurugan Manialagan	Granite River Labs
Mike Engbretson	Granite River Labs
Mike Wu	Granite River Labs
Mukesh Tatiya	Granite River Labs
Rajaraman V	Granite River Labs
Tim Lin	Granite River Labs
Alan Berkema	Hewlett Packard
Lee Atkinson	Hewlett Packard
Rahul Lakdawala	Hewlett Packard
Robin Castell	Hewlett Packard
Roger Benson	Hewlett Packard
Ron Schooley	Hewlett Packard
Hideyuki HAYAFUJI	Hosiden Corporation
Keiji Mine	Hosiden Corporation
Masaki YAMAOKA	Hosiden Corporation
Takashi MUTO	Hosiden Corporation
Yasunori NISHIKAWA	Hosiden Corporation
Kenneth Chan	HP Inc.
Lee Atkinson	HP Inc.
Steve Chen	HP Inc.
Suketu Partiwala	HP Inc.
Suketu Partiwala	HP Inc.
Vaibhav Malik	HP Inc.
Walter Fry	HP Inc.
Bai Sean	Huawei Technologies Co., Ltd.
Chunjiang Zhao	Huawei Technologies Co., Ltd.
JianQuan Wu	Huawei Technologies Co., Ltd.
Li Zongjian	Huawei Technologies Co., Ltd.
Lihua Duan	Huawei Technologies Co., Ltd.
Min Chen	Huawei Technologies Co., Ltd.
Wang Feng	Huawei Technologies Co., Ltd.
Wei Haihong	Huawei Technologies Co., Ltd.
Robert Heaton	Indie Semiconductor
Vincent Wang	Indie Semiconductor
Sie Boo Chiang	Infineon Technologies
Tue Fatt David Wee	Infineon Technologies
Wee Tar Richard Ng	Infineon Technologies
Wolfgang Furtner	Infineon Technologies
Bob Dunstan	Intel Corporation
Brad Saunders	Intel Corporation
Chee Lim Nge	Intel Corporation
Christine Krause	Intel Corporation
Dan Froelich	Intel Corporation
David Harriman	Intel Corporation
David Hines	Intel Corporation
David Thompson	Intel Corporation
Guobin Liu	Intel Corporation
Harry Skinner	Intel Corporation
Henrik Leegaard	Intel Corporation
Jenn Chuan Cheng	Intel Corporation
Jervis Lin	Intel Corporation
John Howard	Intel Corporation
Karthi Vadivelu	Intel Corporation
Leo Heiland	Intel Corporation
Maarit Harkonen	Intel Corporation
Nge Chee Lim	Intel Corporation
Paul Durley	Intel Corporation
Rahman Ismail	Intel Corporation
Rajaram Regupathy	Intel Corporation
Ronald Swartz	Intel Corporation
Sarah Sharp	Intel Corporation
Scott Brenden	Intel Corporation
Sridharan Ranganathan	Intel Corporation
Steve McGowan	Intel Corporation
Tim McKee	Intel Corporation
Toby Opferman	Intel Corporation

iTeh STANDARD PREVIEW
(standards.iteh.ai)
IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/c3721706-a2a2-4bf1-ac65-4bd01f8b5573/iec-62680-1-2-2019

Jia Wei	Intersil Corporation
Al Hsiao	ITE Tech. Inc.
Greg Song	ITE Tech. Inc.
Richard Guo	ITE Tech. Inc.
Victor Lin	ITE Tech. Inc.
Y.C. Chou	ITE Tech. Inc.
Kenta Minejima	Japan Aviation Electronics Industry Ltd. (JAE)
Mark Saubert	Japan Aviation Electronics Industry Ltd. (JAE)
Toshio Shimoyama	Japan Aviation Electronics Industry Ltd. (JAE)
Brian Fetz	Keysight Technologies Inc.
Babu Mailachalam	Lattice Semiconductor Corp
Gianluca Mariani	Lattice Semiconductor Corp
Joel Coplen	Lattice Semiconductor Corp
Thomas Watza	Lattice Semiconductor Corp
Vesa Lauri	Lattice Semiconductor Corp
Bruce Chuang	Leadtrend
Eilian Liu	Leadtrend
Daniel H Jacobs	LeCroy Corporation
Jake Jacobs	LeCroy Corporation
Kimberley McKay	LeCroy Corporation
Mike Micheletti	LeCroy Corporation
Roy Chestnut	LeCroy Corporation
Tyler Joe	LeCroy Corporation
Phil Jakes	Lenovo
Aaron Melgar	Lion Semiconductor
Chris Zhou	Lion Semiconductor
Sehyung Jeon	Lion Semiconductor
Wonyoung Kim	Lion Semiconductor
Yongho Kim	Lion Semiconductor
Dave Thompson	LSI Corporation
Alan Kinningham	Luxshare-ICT
Daniel Chen	Luxshare-ICT
James Stevens	Luxshare-ICT
Josue Castillo	Luxshare-ICT
Scott Shuey	Luxshare-ICT
Chikara Kakizawa	Maxim Integrated Products
Jacob Scott	Maxim Integrated Products
Ken Helfrich	Maxim Integrated Products
Michael Miskho	Maxim Integrated Products
Chris Yokum	MCCI Corporation
Geert Knapen	MCCI Corporation
Terry Moore	MCCI Corporation
Velmurugan Selvaraj	MCCI Corporation
Satoru Kumashiro	MegaChips Corporation
Brian Marley	Microchip Technology Inc.
Dave Perchlik	Microchip Technology Inc.
Don Perkins	Microchip Technology Inc.
Fernando Gonzalez	Microchip Technology Inc.
John Sisto	Microchip Technology Inc.
Josh Averyt	Microchip Technology Inc.
Kiet Tran	Microchip Technology Inc.
Mark Bohm	Microchip Technology Inc.
Matthew Kalibat	Microchip Technology Inc.
Mick Davis	Microchip Technology Inc.
Prasanna Vengateshan	Microchip Technology Inc.
Rich Wahler	Microchip Technology Inc.
Richard Petrie	Microchip Technology Inc.
Ronald Kunin	Microchip Technology Inc.
Shannon Cash	Microchip Technology Inc.
Thomas Farkas	Microchip Technology Inc.
Andrew Yang	Microsoft Corporation
Anthony Chen	Microsoft Corporation
Arvind Murching	Microsoft Corporation
Dave Perchlik	Microsoft Corporation
David Voth	Microsoft Corporation
Geoff Shew	Microsoft Corporation
Jayson Kastens	Microsoft Corporation
Kai Inha	Microsoft Corporation
Marwan Kadado	Microsoft Corporation
Michelle Bergeron	Microsoft Corporation
Rahul Ramadas	Microsoft Corporation
Randy Aull	Microsoft Corporation
Shiu Ng	Microsoft Corporation
Timo Toivola	Microsoft Corporation
Toby Nixon	Microsoft Corporation
Vivek Gupta	Microsoft Corporation
Yang You	Microsoft Corporation
Aaron Xu	Monolithic Power Systems Inc.
Bo Zhou	Monolithic Power Systems Inc.
Christian Sporck	Monolithic Power Systems Inc.
Di Han	Monolithic Power Systems Inc.
Zhihong Yu	Monolithic Power Systems Inc.
Dan Wagner	Motorola Mobility Inc.
Ben Crowe	MQP Electronics Ltd.
Pat Crowe	MQP Electronics Ltd.
Sten Carlsen	MQP Electronics Ltd.
Kenji Oguma	NEC Corporation
Frank Borngräber	Nokia Corporation
Kai Inha	Nokia Corporation
Pekka Leinonen	Nokia Corporation
Richard Petrie	Nokia Corporation
Sten Carlsen	Nokia Corporation
Abhijeet Kulkarni	NXP Semiconductors
Ahmad Yazdi	NXP Semiconductors
Bart Vertenten	NXP Semiconductors
Dennis Ha	NXP Semiconductors
Dong Nguyen	NXP Semiconductors
Guru Prasad	NXP Semiconductors
Ken Jaramillo	NXP Semiconductors
Krishnan TN	NXP Semiconductors
Michael Joehren	NXP Semiconductors
Robert de Nie	NXP Semiconductors
Rod Whitby	NXP Semiconductors
Vijendra Kuroodi	NXP Semiconductors
Winston Langeslag	NXP Semiconductors
Robert Heaton	Obsidian Technology
Andrew Yoo	ON Semiconductor
Brady Maasen	ON Semiconductor
Bryan McCoy	ON Semiconductor
Christian Klein	ON Semiconductor
Cor Voorwinden	ON Semiconductor
Edward Berrios	ON Semiconductor
Michael Smith	ON Semiconductor
Oscar Freitas	ON Semiconductor
Tom Duffy	ON Semiconductor
Craig Wiley	Parade Technologies Inc.
Aditya Kulkarni	Power Integrations
Amruta Patra	Power Integrations
Rahul Joshi	Power Integrations
Ricardo Pregiteer	Power Integrations
Shruti Anand	Power Integrations
Amit gupta	Qualcomm, Inc

iTeh STANDARD PREVIEW
(standards.iteh.ai)
IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/c3721706-a2a2-4bf1-ac65-4bd01f8b5573/iec-62680-1-2-2019

George Paparrizos	Qualcomm, Inc
Giovanni Garcea	Qualcomm, Inc
Jack Pham	Qualcomm, Inc
James Goel	Qualcomm, Inc
Joshua Warner	Qualcomm, Inc
Karyn Vuong	Qualcomm, Inc
Vamsi Samavedam	Qualcomm, Inc
Vatsal Patel	Qualcomm, Inc
Chris Sporck	Qualcomm, Inc.
Craig Aiken	Qualcomm, Inc.
Narendra Mehta	Qualcomm, Inc.
Terry Remple	Qualcomm, Inc.
Will Kun	Qualcomm, Inc.
Yoram Rimoni	Qualcomm, Inc.
Tsung-Peng Chuang	Realtek Semiconductor Corp.
Atsushi Mitamura	Renesas Electronics Corp.
Bob Dunstan	Renesas Electronics Corp.
Brian Allen	Renesas Electronics Corp.
Dan Aoki	Renesas Electronics Corp.
Hajime Nozaki	Renesas Electronics Corp.
John Carpenter	Renesas Electronics Corp.
Kiichi Muto	Renesas Electronics Corp.
Masami Katagiri	Renesas Electronics Corp.
Nobuo Furuya	Renesas Electronics Corp.
Patrick Yu	Renesas Electronics Corp.
Peter Teng	Renesas Electronics Corp.
Philip Leung	Renesas Electronics Corp.
Steve Roux	Renesas Electronics Corp.
Tetsu Sato	Renesas Electronics Corp.
Toshifumi Yamaoka	Renesas Electronics Corp.
Chunan Kuo	Richtek Technology Corporation
Heinz Wei	Richtek Technology Corporation
TZUHSIEN CHUANG	Richtek Technology Corporation
Tatsuya Irisawa	Ricoh Company Ltd.
Akihiro Ono	Rohm Co. Ltd.
Chris Lin	Rohm Co. Ltd.
Hidenori Nishimoto	Rohm Co. Ltd.
Kris Bahar	Rohm Co. Ltd.
Manabu Miyata	Rohm Co. Ltd.
Ruben Balbuena	Rohm Co. Ltd.
Takashi Sato	Rohm Co. Ltd.
Vijendra Kuroodi	Rohm Co. Ltd.
Yusuke Kondo	Rohm Co. Ltd.
Kazuomi Nagai	ROHM Co., Ltd.
Matti Kulmala	Salcomp Plc
Toni Lehimo	Salcomp Plc
Tong Kim	Samsung Electronics Co. Ltd.
Alvin Cox	Seagate Technology LLC
Emmanuel Lemay	Seagate Technology LLC
John Hein	Seagate Technology LLC
Marc Noblitt	Seagate Technology LLC
Michael Morgan	Seagate Technology LLC
Ronald Rueckert	Seagate Technology LLC
Tony Priborsky	Seagate Technology LLC
Chin Chang	Semtech Corporation
Tom Farkas	Semtech Corporation
Ning Dai	Silergy Corp.
Wanfeng Zhang	Silergy Corp.
Kafai Leung	Silicon Laboratories, Inc.
Kok Hong Soh	Silicon Laboratories, Inc.
Sorin Badiu	Silicon Laboratories, Inc.
Steven Ghang	Silicon Laboratories, Inc.
Abhishek Sardeshpande	SiliConch Systems Private Limited
Aniket Mathad	SiliConch Systems Private Limited
Chandana N	SiliConch Systems Private Limited
Jaswanth Ammineni	SiliConch Systems Private Limited
Jinisha Patel	SiliConch Systems Private Limited
Kaustubh Kumar	SiliConch Systems Private Limited
Nitish Nitish	SiliConch Systems Private Limited
Pavitra Balasubramanian	SiliConch Systems Private Limited
Rakesh Polasa	SiliConch Systems Private Limited
Shubham Paliwal	SiliConch Systems Private Limited
Vishnu Pusuluri	SiliConch Systems Private Limited
John Sisto	SMSC
Ken Gay	SMSC
Mark Bohm	SMSC
Richard Wahler	SMSC
Shannon Cash	SMSC
Tim Knowlton	SMSC
William Chiechi	SMSC
Shigenori Tagami	Sony Corporation
Shinichi Hirata	Sony Corporation
Amanda Hosler	Specwerkz
Bob Dunstan	Specwerkz
Diane Lenox	Specwerkz
Michael Munn	StarTech.com Ltd.
Fabien Friess	ST-Ericsson
Giuseppe Platania	ST-Ericsson
Jean-Francois Gatto	ST-Ericsson
Milan Stamenkovic	ST-Ericsson
Nicolas Florenchie	ST-Ericsson
Patrizia Milazzo	ST-Ericsson
Christophe Cochard	STMicroelectronics
Christophe Lorin	STMicroelectronics
Jessy Guilbot	STMicroelectronics
Joel Huloux	STMicroelectronics
John Bloomfield	STMicroelectronics
Massimo Panzica	STMicroelectronics
Meriem Mersel	STMicroelectronics
Nathalie Ballot	STMicroelectronics
Pascal Legrand	STMicroelectronics
Patrizia Milazzo	STMicroelectronics
Richard O'Connor	STMicroelectronics
Morten Christiansen	Synopsys, Inc.
Nivin George	Synopsys, Inc.
Zongyao Wen	Synopsys, Inc.
Joan Marrinan	Tektronix
Kimberley McKay	Teledyne-LeCroy
Matthew Dunn	Teledyne-LeCroy
Tony Minchell	Teledyne-LeCroy
Anand Dabak	Texas Instruments
Bill Waters	Texas Instruments
Bing Lu	Texas Instruments
Deric Waters	Texas Instruments
Grant Ley	Texas Instruments
Gregory Watkins	Texas Instruments
Ingolf Frank	Texas Instruments
Ivo Huber	Texas Instruments
Javed Ahmad	Texas Instruments

iTeh STANDARD PREVIEW
(standards.iteh.ai)
IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/e5721700-a2a2-4bff-ac05-4bd01f8b5573/iec-62680-1-2-2019

Jean Picard	Texas Instruments
John Perry	Texas Instruments
Martin Patoka	Texas Instruments
Mike Campbell	Texas Instruments
Scott Jackson	Texas Instruments
Shafiuddin Mohammed	Texas Instruments
Srinath Hosur	Texas Instruments
Steven Tom	Texas Instruments
Yoon Lee	Texas Instruments
Tod Wolf	The Silanna Group Pty. Ltd.
Chris Yokum	Total Phase
Brad Cox	Ventev Mobile
Colin Vose	Ventev Mobile
Dydron Lin	VIA Technologies, Inc.
Fong-Jim Wang	VIA Technologies, Inc.
Jay Tseng	VIA Technologies, Inc.
Rex Chang	VIA Technologies, Inc.
Terrance Shih	VIA Technologies, Inc.
Ho Wen Tsai	Weltrend Semiconductor
Hung Chiang	Weltrend Semiconductor
Jeng Cheng Liu	Weltrend Semiconductor
Priscilla Lee	Weltrend Semiconductor
Wayne Lo	Weltrend Semiconductor
Charles Neumann	Western Digital Technologies, Inc.
Curtis Stevens	Western Digital Technologies, Inc.
John Maroney	Western Digital Technologies, Inc.
Joe O'Brien	Wilder Technologies
Will Miller	Wilder Technologies
Juejia Zhou	Xiaomi Communications Co., Ltd.
Xiaoxing Yang	Xiaomi Communications Co., Ltd.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/c3721706-a2a2-4bf1-ac65-4bd01f8b5573/iec-62680-1-2-2019

Revision History

Revision	Version	Comments	Issue Date
1.0	1.0	Initial release Revision 1.0	5 July 2012
1.0	1.1	Including errata through 31-October-2012	31 October 2012
1.0	1.2	Including errata through 26-June-2013	26 June 2013
1.0	1.3	Including errata through 11-March-2014	11 March 2014
2.0	1.0	Initial release Revision 2.0	11 August 2014
2.0	1.1	Including errata through 7-May 2015	7 May 2015
2.0	1.2	Including errata through 25-March-2016	25 March 2016
2.0	1.3	Including errata through 11-January-2017	11 January 2017
3.0	1.0	Initial release Revision 3.0	11 December 2015
3.0	1.0a	Including errata through 25-March-2016	25 March 2016
3.0	1.1	Including errata through 12-January-2016	12 January 2017
3.0	1.2	Including errata through 21-June-2018:	21 June 2018

iTeh STANDARD PREVIEW
(standards.iteh.ai)
IEC 62680-1-2:2019
https://standards.iteh.ai/catalog/standards/sist/c3721706-a2a2-4bf1-ac65-4bd01f8b5573/iec-62680-1-2-2019