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**Universal serial bus interfaces for data and power –
Part 2-2: Micro-USB Cables and Connectors Specification, Revision 1.01**

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Part 2-2: Micro-USB Cables and Connectors Specification, Revision 1.01

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The text of this standard is based on documents 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.

This first edition cancels and replaces IEC 62680-2 published in 2013. This edition constitutes a technical revision.

This bilingual version (2018-05) corresponds to the English version, published in 2015-09.

The text of this standard is based on the following documents:

CDV	Report on voting
100/2332/CDV	100/2435/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

The French version of this standard has not been voted upon.

A list of all the 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 publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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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.

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This series covers the Universal Series Bus interfaces for data and power and consists of the following parts:

IEC 62680-1-1, *Universal Serial Bus interfaces for data and power – Part 1-1: Common components – USB Battery Charging Specification, Revision 1.2*

IEC 62680-2-1, *Universal Serial Bus interfaces for data and power – Part 2-1: Universal Serial Bus Specification, Revision 2.0*

IEC 62680-2-2, *Universal Serial Bus interfaces for data and power – Part 2-2: USB Micro-USB Cables and Connectors Specification, Revision 1.01*

IEC 62680-2-3, *Universal Serial Bus interfaces for data and power – Part 2-3: Universal Serial Bus Cables and Connectors Class Document Revision 2.0*

This part of the IEC 62680 series consists of several distinct parts:

- the main body of the text, which consists of the original specification and all ECN and Errata developed by the USB-IF.

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Note: All Engineering Change Notice's (ECN) and Errata documents as of September 01, 2012 that pertain to this core specification follow the last page of the specification starting on page 39.

**Universal Serial Bus
Micro-USB Cables and Connectors
Specification**

Revision 1.01
April 4, 2007

Revision History

Revision	Issue Date	Comment
0.6	1/30/2006	Rewritten to all sections
0.7	3/24/2006	Added revised Micro-USB drawings to Rev.0.8
0.8	4/19/2006	Editorial changes and additions by Jan Fahllund (Nokia)
0.8b	4/26/2006	Corrections to the 0.8 version (based by comments from contributors)
0.9	6/7/2006	Corrections based on comments from the 0.8b version
1.0RC	8/2/2006	Added lubricant recommendation, LLRC delta change specified
1.01RC	11/10/2006	Editorial changes and addition based on Oct-06 USB-IF CCWG meeting.
1.02RC	12/10/2006	Shell material thickness tolerances changed so that material can be 0.25 mm or 0.3 mm; edited three pictures (Figure 4-10, 4-11 and 4-12).
1.03RC	12/11/2006	Two pictures edited (Figure 4-8 and 4-9). In fig 4-8 max height to be 2.8 mm MAX. In fig 4-9 R0.25 mm MAX to be R0.30 mm MAX.
1.0RC3	12/19/2006	For BoD approval
1.0	1/12/2007	Approved
1.0	1/22/2007	Cosmetic edits for publication
1.01	4/4/2007	Editorial corrections and additions to contributor list. Reinserted shell and plug material requirements as section 6.10, Clarified wording on Plating Recommendations.

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Contributors

Mark Rodda, (editor) Motorola	Yoichi Nakazawa, JST
Jan Fahllund, (editor) Nokia	Kevin Fang, Longwell Electronics
Jim Koser, (CCWG Chairman), Foxconn	Morgan Jair, Main Super Co.
Ed Beeman, 2010 Tech	Tom Kawaguchi, Matsushita Electric Works
Glen Chandler, Advanced-Connectek (Acon)	Ron Ward, Matsushita Electric Works
Charles Wang, Advanced-Connectek (Acon)	Satoshi Yamamoto, Matsushita Electric Works
Toshinori Sasaki, Across Techno	Yasuhiko Shinohara, Mitsumi
Minoru Ohara, Allion	Atsushi Nishio, Mitsumi
Brad Brown, ATL	Hitoshi Kawamura, Mitsumi
Christopher Mattson, ATL	Scott Sommers, Molex
Marcus Darrington, ATL	Kevin Delaney, Molex
Jaremy Flake, ATL Technology	Kieran Wright, Molex
George Olear, Contech Research	Padraig McDaid, Molex
Roy Ting, Elka	Mikko Poikselka, Molex
Sophia Liu, ETC	Sam Liu, Newnex Technology Corp.
Bill Northey, FCI	Richard Petrie, Nokia
Tsuneki Watanabe, Foxconn	Kai Silvennoinen, Nokia
Jim Zhao, Foxconn	Panu Ylihaavisto, Nokia
David Ko, Foxconn	Arthur Zarnowitz, Palm
Jong Tseng, Foxconn	Douglas Riemer, SMK
Jack Lu, Foxlink	Eric Yagi, SMK
Tim Chang, Foxlink	Abid Hussain, Summit Microelectronics
Sathid Inthon, Fujikura	Kaz Osada, Tyco
Toshi Mimura, Fujijura	Masaru Ueno, Tyco
Alan Berkema, Hewlett-Packard	Yoshikazu Hirata, Tyco
Karl Kwiat, Hirose	Mark Paxson, VTM Inc.
Shinya Tono, Hirose	
Kazu Ichikawa, Hirose	
Ryozo Koyama, Hirose	
Yousuke Takeuchi, Hirose	
Tsuyoshi Kitagawa, Hosiden	
Jim Eilers, Hosiden	
Kazuhiro Saito, JAE	
Ron Muir, JAE	
Mark Saubert, JAE	
Yasuhiro Miya, JST	
Takahiro Diguchi, JST	

UNIVERSAL SERIAL BUS INTERFACES FOR DATA AND POWER –

Part 2-2: Micro-USB Cables and Connectors Specification, Revision 1.01

1 Introduction

1.1 General

USB has become a popular interface for exchanging data between cell phone and portable devices. Many of these devices have become so small it is impossible to use standard USB components as defined in the USB 2.0 specification. In addition the durability requirements of the Cell Phone and Portable Devices market exceed the specifications of the current interconnects. Since Cell Phones and other small Portable Devices are the largest market potential for USB, this specification is addressing this very large market while meeting all the requirements for electrical performance within the USB 2.0 specification.

1.2 Objective of the Specification

The purpose of this document is to define the requirements and features of a Micro-USB connector that will meet the current and future needs of the Cell Phone and Portable Devices markets, while conforming to the USB 2.0 specification for performance, physical size and shape of the Micro-USB interconnect.

This is not a stand-alone document. Any aspects of USB that are not specifically changed by this specification are governed by the USB 2.0 Specification and USB On-The-Go Supplement.

1.3 Intended Audience/Scope

Cell phone and Portable Devices have become so thin that the current Mini-USB does not fit well within the constraints of future designs. Additional requirements for a more rugged connector that will have durability past 10 000 cycles and still meet the USB 2.0 specification for mechanical and electrical performance was also a consideration. The Mini-USB could not be modified and remain backward compatible to the existing connector as defined in the USB OTG specification.