Management Component Transport Protocol (MCTP) IDs and Codes

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14 This document's normative language is English. Translation into other languages is permitted.

CONTENTS

15 # 1 Foreword

16 The *Management Component Transport Protocol (MCTP) IDs and Codes* (DSP0239) was prepared by the PMCI Working Group.

17 DMTF is a not-for-profit association of industry members dedicated to promoting enterprise and systems management and interoperability.

18 ## 1.1 Acknowledgments

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22 # 2 Introduction

23 This document presents a collection of IDs and codes that are used across the Management Component Transport Protocol (MCTP) and transport binding specifications.

24 The MCTP defines a communication model intended to facilitate communication between:

- Management controllers and other management controllers
- Management controllers and management devices

25 The communication model includes a message format, transport description, message exchange patterns, and configuration and initialization messages.

26 The *MCTP Base Protocol Specification* (DSP0236) describes the protocol and commands used for communication within and initialization of an MCTP network. Associated with the *Base Protocol Specification* are transport binding specifications that define how the MCTP base protocol and MCTP control commands are implemented on a particular physical transport type and medium.

27 ## 2.1 Document conventions

28 ### 2.1.1 Typographical conventions

29 The following typographical conventions are used in this document:

- Document titles are marked in *italics*.
- ABNF rules are in monospaced font.

30 ### 2.1.2 ABNF usage conventions

31 Format definitions in this document are specified using ABNF (see RFC5234), with the following deviations:

- Literal strings are to be interpreted as case-sensitive Unicode characters, as opposed to the definition in RFC5234 that interprets literal strings as case-insensitive US-ASCII characters.

32 ### 2.1.3 Reserved and unassigned values

33 Unless otherwise specified, any reserved, unspecified, or unassigned values in enumerations or other numeric ranges are reserved for future definition by DMTF.

34 Unless otherwise specified, numeric or bit fields that are designated as reserved shall be written as 0 (zero) and ignored when read.

2.1.4 Byte ordering

Unless otherwise specified, byte ordering of multi-byte numeric fields or bit fields is "Big Endian" (that is, the lower byte offset holds the most significant byte, and higher offsets hold lesser significant bytes).

2.1.5 Notation

See Annex A for notation.

39

3 Scope

40 The *Management Component Transport Protocol (MCTP) IDs and Codes* document provides a consolidated list of major IDs and codes used across the MCTP protocol and transport binding specifications. Only IDs and codes that are required by a particular specification are to be included in that specification. IDs and code values for other specifications are not to be repeated for reference. Instead, provide a reference to this specification.

41 The following is an overview of the different sets of codes and identifiers (enumeration values) that are specified in this document:

- **MCTP message type codes**

42 Collection of the message type codes used for MCTP messages

- **MCTP physical medium identifiers**

43 Collection of identifiers for the different types of physical media that have been defined

- **MCTP physical transport binding identifiers**

44 Collection of identifiers for the specifications that define the operation, formatting, addressing, and encapsulation of MCTP packets over different physical media

- **MCTP host interface type identifiers**

45 Collection of identifiers for the different physical interfaces used to transfer MCTP packets between the host and the management controller

- **MCTP device type identifiers**

46 Collection of identifiers for the different types of devices

47 # 4 Normative references

48 The following referenced documents are indispensable for the application of this document. For dated or versioned references, only the edition cited (including any corrigenda or DMTF update versions) applies. For references without a date or version, the latest published edition of the referenced document (including any corrigenda or DMTF update versions) applies.

49 DMTF specifications are available at https://www.dmtf.org/standards/published_documents.

50 DMTF DSP0004, *Common Information Model (CIM) Metamodel 3.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0004_3.0.pdf

51 DMTF DSP0134, *SMBIOS Reference Specification 3.8*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0134_3.8.pdf

52 DMTF DSP0222, *Network Controller Sideband Interface (NC-SI) Specification 1.2*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0222_1.2.pdf

53 DMTF DSP0223, *Generic Operations Specification 2.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0223_2.0.pdf

54 DMTF DSP0233, *Management Component Transport Protocol (MCTP) I3C Transport Binding Specification 1.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0233_1.0.pdf

55 DMTF DSP0234, *CXL™ Fabric Manager API over MCTP Binding Specification 1.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0234_1.0.pdf

56 DMTF DSP0235, *NVMe (NVM Express) Management Messages over MCTP Binding Specification 1.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0235_1.0.pdf

57 DMTF DSP0236, *Management Component Transport Protocol (MCTP) Base Specification 1.3*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0236_1.3.pdf

58 DMTF DSP0237, *Management Component Transport Protocol (MCTP) SMBus/I^2C Transporting Binding Specification 1.2*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0237_1.2.pdf

59 DMTF DSP0238, *Management Component Transport Protocol (MCTP) PCIe VDM Transport Binding Specification 1.3*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0238_1.3.pdf

60 DMTF DSP0241, *PLDM Over MCTP Binding Specification 1.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0241_1.0.pdf

61 DMTF DSP0253, *MCTP Serial Transport Binding Specification 1.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0253_1.0.pdf

62 DMTF DSP0254, *MCTP KCS Transport Binding Specification 1.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0254_1.0.pdf

63 DMTF DSP0261, *NC-SI Over MCTP Binding Specification 1.3*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0261_1.3.pdf

64 DMTF DSP0275, *Security Protocol and Data Model (SPDM) over MCTP Binding Specification 1.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0275_1.0.pdf

65 DMTF DSP0276, *Secured Messages using SPDM over MCTP Binding Specification 1.2*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0276_1.2.pdf

66 DMTF DSP0281, *CXL™ Type 3 Device Component Command Interface over MCTP Binding Specification 1.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0281_1.0.pdf

67 DMTF DSP0283, *Management Component Transport Protocol (MCTP) over Universal Serial Bus (USB) Transport Binding Specification 1.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0283_1.0.pdf

68 DMTF DSP0284, *Management Component Transport Protocol (MCTP) Memory-Mapped Buffer Interface (MMBI) Transport Binding Specification 1.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0284_1.0.pdf

69 DMTF DSP0290, *Management Component Transport Protocol (MCTP) UCIe™ Transport Binding Specification 1.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0290_1.0.pdf

70 DMTF DSP0291, *PCIe Management Interface (PCIe-MI) over MCTP Binding Specification 1.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0291_1.0.pdf

71 DMTF DSP0292, *Management Component Transport Protocol (MCTP) PCC Transport Binding Specification 1.0*
https://www.dmtf.org/sites/default/files/standards/documents/DSP0292_1.0.pdf

72 DMTF DSP1001, *Management Profile Usage Guide 1.2*
https://www.dmtf.org/sites/default/files/standards/documents/DSP1001_1.2.pdf

73 IETF RFC5234, *ABNF: Augmented BNF for Syntax Specifications*, January 2008
https://tools.ietf.org/html/rfc5234

74 ISO/IEC Directives, Part 2, *Rules for the structure and drafting of ISO and IEC documents,*
https://www.iso.org/sites/directives/current/part2/index.xhtml

75 PCI-SIG, *PCI Express Base Specification 1.1*, PCIe V1.1, March 28, 2005
https://pcisig.com/specifications

76 PCI-SIG, *PCI Express Base Specification 2.1*, PCIe V2.1, March 4, 2009
https://pcisig.com/specifications

77 PCI-SIG, *PCI Express Base Specification 3.1a*, PCIe V3.1a, December 7, 2015
https://pcisig.com/specifications

78 PCI-SIG, *PCI Express Base Specification 4.0*, PCIe V4.0, October 5, 2017
https://pcisig.com/specifications

79 PCI-SIG, *PCI Express Base Specification 5.0*, PCIe V5.0, May 28, 2019
https://pcisig.com/specifications

80 PCI-SIG, *PCI Express Base Specification 6.2*, PCIe V6.2, February 12, 2024
https://pcisig.com/specifications

81 PCI-SIG, *PCI Express Base Specification 7.0*, PCIe V7.0, June 10, 2025
https://pcisig.com/specifications

82 NXP Semiconductors UM10204, *I^2C-bus specification and user manual*, Rev. 6, 4 April 2014
https://web.archive.org/web/20210813122132/https://www.nxp.com/docs/en/user-guide/UM10204.pdf

83 SMBus, *System Management Bus (SMBus) Specification v2.0*, SMBus, 2000
http://smbus.org/specs/smbus20.pdf

84 SMBus, *System Management Bus (SMBus) Specification v3.0*, SMBus, December 20, 2014
http://smbus.org/specs/SMBus_3_0_20141220.pdf

85 SMBus, *System Management Bus (SMBus) Specification v3.1*, SMBus, March 19, 2018
http://smbus.org/specs/SMBus_3_1_20180319.pdf

86 *MIPI Alliance Specification for I3C® (Improved Inter Integrated Circuit)*, version 1.0, MIPI Alliance, Inc., 23 December 2016 (Adopted 31 December 2016)
https://www.mipi.org/specifications/i3c-sensor-specification

87 *MIPI Alliance Specification for I3C Basic^{SM} (Improved Inter Integrated Circuit – Basic)*, version 1.0, MIPI Alliance, Inc., 19 July 2018 (Adopted 8 October 2018)
https://resources.mipi.org/mipi-i3c-basic-v1-download

88 *CXL™ 4.0 Specification*
https://computeexpresslink.org/cxl-specification/

89 *Intelligent Platform Management Interface Specification Second Generation*, v2.0, April 21, 2015
https://www.intel.com/content/dam/www/public/us/en/documents/specification-updates/ipmi-intelligent-platform-mgt-interface-spec-2nd-gen-v2-0-spec-update.pdf

90 *Private Enterprise Numbers*, Internet Assigned Numbers Authority (IANA)
https://www.iana.org/assignments/enterprise-numbers/enterprise-numbers

91

5 Terms and definitions

92 In this document, some terms have a specific meaning beyond the normal English meaning. Those terms are defined in this clause.

93 The terms "shall" ("required"), "shall not", "should" ("recommended"), "should not" ("not recommended"), "may", "need not" ("not required"), "can", and "cannot" in this document are to be interpreted as described in ISO/IEC Directives, Part 2, Clause 7. The terms in parentheses are alternatives for the preceding term, for use in exceptional cases when the preceding term cannot be used for linguistic reasons. Note that ISO/IEC Directives, Part 2, Clause 7 specifies additional alternatives. Occurrences of such additional alternatives shall be interpreted in their normal English meaning.

94 The terms "clause", "subclause", "paragraph", and "annex" in this document are to be interpreted as described in ISO/IEC Directives, Part 2, Clause 6.

95 The terms "normative" and "informative" in this document are to be interpreted as described in ISO/IEC Directives, Part 2, Clause 3. In this document, clauses, subclauses, or annexes labeled "(informative)" do not contain normative content. Notes and examples are always informative elements.

96 The terms defined in DSP0004, DSP0223, and DSP1001 apply to this document.

97 Refer to DSP0236 for terms and definitions that are used in the MCTP specifications.

98

6 Symbols and abbreviated terms

99 Refer to DSP0236 for symbols and abbreviated terms that are used in the MCTP specifications.

100

7 MCTP Message Type codes

101 Table 1 defines the values for the Message Type field for different message types transported through MCTP.

102

> **NOTE:** A device that supports a given message type might not support that message type equally across all physical media that connect to the device.

103

Table 1 — MCTP Message Types

Message Type	Message Type Code	Description
MCTP Control	0x00	Messages used to support initialization and configuration of MCTP communication within an MCTP network, as specified in DSP0236
Platform Level Data Model (PLDM)	0x01	Messages used to convey Platform Level Data Model (PLDM) traffic over MCTP, as specified in DSP0241.
NC-SI over MCTP	0x02	Messages used to convey NC-SI Control traffic over MCTP, as specified in DSP0261.
Ethernet over MCTP	0x03	Messages used to convey Ethernet traffic over MCTP as specified in DSP0261.
NVM Express Management Messages over MCTP	0x04	Messages used to convey NVM Express (NVMe) Management Messages over MCTP, as specified in DSP0235.
SPDM over MCTP	0x05	Messages used to convey Security Protocol and Data Model Specification (SPDM) traffic over MCTP, as specified in DSP0275.
Secured Messages	0x06	Messages used to convey *Secured Messages using SPDM over MCTP Binding Specification* traffic, as specified in DSP0276.
CXL FM API over MCTP	0x07	Messages used to convey *CXL™ Fabric Manager API over MCTP Binding Specification* traffic as specified in DSP0234.
CXL CCI over MCTP	0x08	Messages used to convey *CXL™ Type 3 Device Component Command Interface over MCTP Binding Specification* traffic as specified in DSP0281.

Message Type	Message Type Code	Description
PCIe-MI over MCTP	0x09	Messages used to convey *PCIe Management Interface (PCIe-MI) over MCTP Binding Specification* traffic as specified in DSP0291.
Vendor Defined – PCI	0x7E	Message type used to support VDMs where the vendor is identified using a PCI-based vendor ID. The specification of the format of this message is given in DSP0236. Otherwise, the message body content is specified by the vendor, company, or organization identified by the given vendor ID.
Vendor Defined – IANA	0x7F	Message type used to support VDMs where the vendor is identified using an IANA-based vendor ID. This format uses a number from the *Private Enterprise Numbers* table that is assigned and maintained by the Internet Assigned Numbers Authority (IANA) as the means of identifying a particular vendor, company, or organization. The specification of the format of this message is given in DSP0236. Otherwise, the message body content is specified by the vendor, company, or organization identified by the given vendor ID.
Reserved	all other	Reserved

104

8 MCTP physical medium identifiers

105 Table 2 defines a set of numbers that correspond to different media types that can be used with MCTP. The identifier is primarily used to identify which physical addressing format is used for MCTP packets on the bus.

106

> **NOTE:** Multiple revision numbers are included for some specifications to allow differentiation among certain characteristics such as compatibility, throughput, or maximum packet size.

107

Table 2 — MCTP Physical Medium Identifiers

Physical Media Identifier	Description
0x00	Unspecified
0x01	SMBus 2.0 100 kHz compatible
0x02	SMBus 2.0 or I^2C 100 kHz compatible
0x03	I^2C 100 kHz compatible (Standard-mode)
0x04	SMBus 3.0 or I^2C 400 kHz compatible (Fast-mode)
0x05	SMBus 3.0 or I^2C 1 MHz compatible (Fast-mode Plus)
0x06	I^2C 3.4 MHz compatible (High-speed mode)
0x07	Reserved
0x08	PCIe revision 1.1 compatible
0x09	PCIe revision 2.0 compatible
0x0A	PCIe revision 2.1 compatible
0x0B	PCIe revision 3.x compatible
0x0C	PCIe revision 4.x compatible
0x0D	PCIe revision 5.x compatible or CXL 1.x / 2.x compatible
0x0E	PCIe revision 6.x Non-Flit Mode compatible
0x0F	PCI compatible (PCI 1.0, 2.0, 2.1, 2.2, 2.3, 3.0, PCI-X 1.0, PCI-X 2.0)
0x10	USB 1.1 compatible

Physical Media Identifier	Description
0x11	USB 2.0 compatible
0x12	USB 3.0 compatible
0x13:0x17	Reserved
0x18	NC-SI over RBT (A physical interface based on RMII as defined in DSP0222)
0x19	Management Component Transport Protocol (MCTP) UCIe™ Transport Binding Specification DSP0290
0x1A	Management Component Transport Protocol (MCTP) PCC Transport Binding Specification DSP0292
0x1B:0x1F	Reserved
0x20	KCS[1] Legacy (Fixed Address Decoding)
0x21	KCS[1] over PCI (Base Class 0xC0 Subclass 0x01)
0x22	Serial Host[2] Legacy (Fixed Address Decoding)
0x23	Serial Host[2] over PCI (Base Class 0x07 Subclass 0x00)
0x24	Asynchronous Serial[3] (Between MCs and IMDs)
0x25:0x2F	Reserved
0x30	I3C Basic compatible
0x31:0x3F	Reserved
0x40	PCIe revision 6.x Flit Mode compatible or CXL 3.X compatible
0x41	PCIe revision 7.x Compatible, CXL 4.X compatible
0x42:0xFF	Reserved

1. Keyboard Controller Style Interface – refer to DSP0254.
2. Serial Host refers to a register based UART interface.
3. Asynchronous Serial refers to an 8–bit asynchronous bi-directional serial transmission media where characters are transmitted independently (i.e., each frame carries 8-bits of data).

108

9 MCTP physical transport binding identifiers

109 Table 3 defines a set of numbers that correspond to different media types that can be used with MCTP. The identifier indicates which physical addressing format is used for MCTP packets on the bus.

110 **Table 3 — MCTP Physical Transport Binding Identifiers**

MCTP Physical Transport Binding Identifier	Description
0x00	Reserved
0x01	MCTP over SMBus (DSP0237)
0x02	MCTP over PCIe VDM (DSP0238)
0x03	MCTP over USB (DSP0283)
0x04	MCTP over KCS (DSP0254)
0x05	MCTP over Serial (DSP0253)
0x06	MCTP over I3C (DSP0233)
0x07	MCTP over MMBI (DSP0284)
0x08	MCTP over PCC (DSP0292)
0x09	MCTP over UCIe (DSP0290)
0xFF	Vendor defined **NOTE:** A vendor-defined transport binding must meet the requirements in DSP0236 (in particular, when being bridged to or from standard MCTP transport binding and media combinations).
All other	Reserved

111

10 MCTP host interface type identifiers

112 The SMBIOS specification DSP0134 reserves a range of host interface type identifiers 0x00 through 0x3F for use by this specification. Table 4 defines a set of numbers that correspond to different MCTP host interface types that can be used with MCTP. The identifier indicates which physical interface to transfer MCTP packets between the host and the management controller.

113 **Table 4 — MCTP Host Interface Type Identifiers**

MCTP Host Interface Type Identifier	Description
0x00	Reserved
0x01	Reserved
0x02	KCS: Keyboard Controller Style – refer to the section titled "Keyboard Controller Style (KCS) Interface" of *IPMI*
0x03	8250 UART Register Compatible
0x04	16450 UART Register Compatible
0x05	16550/16550A UART Register Compatible
0x06	16650/16650A UART Register Compatible
0x07	16750/16750A UART Register Compatible
0x08	16850/16850A UART Register Compatible
0x09	I2C / SMBUS
0x0A	I3C
0x0B	PCIe VDM
0x0C	MMBI
0x0D	PCC
0x0E	UCIe
0x0F	USB
0x10:0x3F	Reserved
all other	Assigned by the SMBIOS specification (DSP0134)

114

11 Host interface protocol identifiers

115 In earlier versions of this specification, this section contained a table of host interface protocol identifiers. That table has been moved to the description of the Type 42 record in the SMBIOS specification (DSP0134) version 3.1.1 or later.

116

12 MCTP device type identifiers

117 Table 5 defines the values for the Message Device Type field to be referenced by MCTP and FRU specifications. The device type code descriptions in Table 5 are divided into groups based on commonality of the codes in the group. This grouping is done only for readability and to facilitate referencing.

118 **Table 5 — MCTP Device Types**

MCTP Device Type Code	Description
0	Unspecified
1	Other
Board/Card/Module Devices	
60	Board
61	Card
62	Module
63	System management module
64	System board (main system board, may also be a processor board or internal expansion board)
65	Memory board (board holding memory devices)
66	Memory module
67	Processor module (holds processors; use this designation when processors are not mounted on system board)
68	Add-in card
69	Chassis front panel board (control panel)
70	Back panel board
71	Power management/power distribution board
72	Power system board
73	Drive backplane
74	System internal expansion board (contains expansion slots)

MCTP Device Type Code	Description
75	Other system board (part of a multi-board set that together forms the “main board” for the system)
76	Chassis back panel board
77	Processing blade (a blade module that contains processor, memory, and I/O connections that enable it to operate as a processing device)
78	Connectivity switch (a blade module that provides the fabric or network connection for one or more processing blades or modules)
79	Processor/memory module (processor and memory together on a module)
80	I/O module (a module that contains the main elements of an I/O interface)
81	Processor/ I/O module (a combination processor and I/O module)
Cooling Devices	
90	Cooling device
91	Cooling subsystem
92	Cooling unit/domain – Can be used as a pre-defined logical device for grouping fans or other cooling devices or sensors that are associated in monitoring a particular logical cooling domain.
93	Fan
94	Peltier Cooling Device
95	Liquid Cooling Device
96	Liquid Cooling subsystem
Storage Devices	
105	Other storage device
107	Fixed Disk / Hard Drive
109	CD/DVD Drive
110	Other Silicon Storage Device (for example, FLASH memory)
111	Solid State Drive

MCTP Device Type Code	Description
Power Devices	
120	Power supply
121	Battery
123	Power converter
124	DC-DC converter
125	AC mains power supply
126	DC mains power supply
127	Voltage regulator (with optional voltage/current monitors)
128	Multi-rail Voltage regulator
129	Multi-rail Voltage regulator channel
Chip Devices	
135	Processor
136	Chipset component
137	Management controller
138	Peripheral controller
139	SEEPROM
140	NVRAM chip
141	FLASH Memory chip
142	Memory chip (for single-chip only; use memory module for pre-packed memory devices that are used with standardized connectors, such as DIMMs, SD cards, and so on)
143	Memory controller
144	Network controller
145	I/O controller
146	South bridge
147	Real Time Clock (RTC)
148	FPGA/CPLD configurable logic device

MCTP Device Type Code	Description
149	Accelerator
150	TPM
151	Subprocessor/Processor-Core
152	GPU
153	DPU
Others	
	All other values are reserved.

119

13 ANNEX A (informative) Notation

120 Notations used in this document include the following:

2:N	In field descriptions, this will typically be used to represent a range of byte offsets starting from byte two and continuing to and including byte N. The lowest offset is on the left, the highest is on the right.
(6)	Parentheses around a single number can be used in message field descriptions to indicate a byte field that may be present or absent.
(3:6)	Parentheses around a field consisting of a range of bytes indicates the entire range may be present or absent. The lowest offset is on the left, the highest is on the right.
DSP0238	Underlined, blue text is typically used to indicate a reference to a document or specification called out in the “Normative References” section or to items hyperlinked within the document.
rsvd	Abbreviation for “reserved.” Case insensitive.
[4]	Square brackets around a number are typically used to indicate a bit offset. Bit offsets are given as zero-based values (that is, the least significant bit (LSb) offset = 0).
[7:5]	A range of bit offsets. The most significant bit is on the left, the least significant bit is on the right.
1b	The lower case “b” following a number consisting of 0s and 1s is used to indicate the number is being given in binary format.
0x12	A leading “0x” is used to indicate a number given in hexadecimal format.

121

14 ANNEX B (informative) Change Log

Version	Date	Description
1.0.0	2009-07-28	
1.1.0	2009-11-03	Added Host Interface Type Identifiers. Added Host Interface Protocol Identifiers. Added reference to NC-SI and added clarification on physical medium identifiers.
1.2.0	2012-06-04	Added Ethernet over MCTP message type. Clarified the description of NC-SI over MCTP and PLDM over MCTP. Added I2C fast plus and high-speed physical medium identifiers. Clarified RMII/NC-SI physical medium identifier description. Fixed references.
1.3.0	2015-03-06	Added message type NVMe (NVM Express) Management Messages over MCTP. Updated references.
1.4.0	2017-01-11	Limited host interface type identifiers to the range 0x00:0x3F. Moved the host interface protocol identifier table to the SMBIOS specification. Updated references.
1.5.0	2017-11-16	Updated contributors and references. Added support for SMBus 3.0 and PCIe Gen 4.
1.6.0	2019-06-04	Added an MCTP Message Type for SPDM. Added an MCTP physical medium identifiers for PCIe revision 5.0, and I3C.
1.7.0	2020-05-26	Added an MCTP Message Type for MCTP Security using SPDM. Added an MCTP physical medium identifiers for CXL.
1.7.1	2020-12-07	Update the contributor list. Correct the I3C entries in the MCTP physical medium identifiers table.
1.7.2	2021-04-05	Removed separate entry for CXL from physical medium identifiers table since CXL uses PCIe as the physical medium. Added CXL compatible reference to physical medium identifier table PCIe 5.x row. Updated to comply with ISO guidelines.
1.8.0	2021-01-12	Added CXL FM API over MCTP to Message Type table. Add MCTP over I3C to MCTP physical transport binding identifiers table.
1.9.0	2021-11-09	Added I2C/SMBUS, I3C, and PCIe VDM to the MCTP host interface type identifiers table. Added CXL CCI over MCTP to the Message Type table. Updated references.
1.10.0	2022-10-28	Added MMBI identifiers for physical transport binding, and host interface type.
1.11.0	2024-02-05	Added 0xE as PCIe 6.X Flit Mode Compatible identifier. Added ID for MMBI. Fixed broken links. Added UCIe physical medium. Added message type for PCIe-MI over MCTP. Added media type identifier for MCTP over PCC. Added physical transport IDs for MCTP over PCC and MCTP over UCIe. Added host interface types PCC, UCIe, and USB.
1.11.1	2024-07-22	Updated the PCIe 6.X opcodes. 0xE is Non-Flit mode, 0x40 is a new value for Flit Mode.

1.12.0	2026-02-24	Added MCTP Device Type table. Added a note explaining multiple revisions of specifications in the MCTP physical medium identifiers table. Added PCIe 7.0/CXL 4.0 medium identifier. Updated CXL and PCIe references.

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15 Bibliography

123 RMII Consortium, *Reduced Media Independent Interface (RMII) Specification v1.2*, RMII, March 20, 1988, http://ebook.pldworld.com/_eBook/-Telecommunications,Networks-/TCPIP/RMII/rmii_rev12.pdf