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Management Component Transport Protocol (MCTP) IDs and Codes

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Tables

Foreword

The *Management Component Transport Protocol (MCTP) IDs and Codes* (DSP0239) was prepared by the PMCI Subgroup of the Pre-OS Working Group.

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Introduction

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

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

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

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

The *MCTP Base Protocol Specification* (MCTP) 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, such as SMBus/I^2C, PCI Express™ (PCIe) Vendor Defined Messaging (VDM), and so on.

Management Component Transport Protocol (MCTP) IDs and Codes

1 Scope

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 should be included in that specification. IDs and codes values for other specifications should not be repeated for reference. Instead, a reference to this specification should be provided.

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**

  Collection of the message type codes used for MCTP messages

- **MCTP physical medium identifiers**

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

- **MCTP physical transport binding identifiers**

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

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

2.1 Approved References

DMTF DSP0236, *Management Component Transport Protocol (MCTP) Base Specification 1.0*, MCTP, http://www.dmtf.org/standards/published_documents/DSP0236_1.0.pdf

DMTF DSP0237, *Management Component Transport Protocol (MCTP) SMBus/I^2C Transporting Binding Specification 1.0*, MCTP SMBus-I^2C, http://www.dmtf.org/standards/published_documents/DSP0237_1.0.pdf

DMTF DSP0238, *Management Component Transport Protocol (MCTP) PCIe VDM Transport Binding Specification 1.0*, MCTP PCIe-V, http://www.dmtf.org/standards/published_documents/DSP0238_1.0.pdf

2.2 Other References

ISO/IEC Directives, Part 2, *Rules for the structure and drafting of International Standards,* http://isotc.iso.org/livelink/livelink?func=ll&objId=4230456&objAction=browse&sort=subtype

PCI-SIG, *PCI Express Base Specification 1.1*, PCIeV1.1, March 28, 2005, http://www.pcisig.com/members/downloads/specifications/pciexpress/PCI_Express_Base_11.pdf

PCI-SIG, *PCI Express Base Specification 2.0*, PCIeV2.0, December 20, 2006, http://www.pcisig.com/members/downloads/specifications/pciexpress/PCI_Express_Base_2.pdf

Philips Semiconductors, *The I²C-Bus Specification v2.0*, I2C, December 1998
http://www.nxp.com/acrobat_download/literature/9398/39340011_20.pdf

RMII Consortium, *Reduced Media Independent Interface (RMII) Specification v1.2*, RMII, 1997,
http://www.national.com/appinfo/networks/files/rmii_1_2.pdf

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

3 Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

3.1
can
used for statements of possibility and capability, whether material, physical, or causal

3.2
cannot
used for statements of possibility and capability, whether material, physical or causal

3.3
conditional
indicates requirements to be followed strictly to conform to the document when the specified conditions are met

3.4
deprecated
indicates that an element or profile behavior has been outdated by newer constructs

3.5
mandatory
indicates requirements to be followed strictly to conform to the document and from which no deviation is permitted

3.6
may
indicates a course of action permissible within the limits of the document

NOTE: An implementation that does *not* include a particular option shall be prepared to interoperate with another implementation that *does* include the option, although perhaps with reduced functionality. An implementation that *does* include a particular option shall be prepared to interoperate with another implementation that does *not* include the option (except for the feature that the option provides).

3.7
may not
indicates flexibility of choice with no implied preference

3.8
need not
indicates a course of action permissible within the limits of the document

3.9

not recommended

indicates that valid reasons may exist in particular circumstances when the particular behavior is acceptable or even useful, but the full implications should be understood and carefully weighed before implementing any behavior described with this label

3.10

obsolete

indicates that an item was defined in prior specifications but has been removed from this specification

3.11

optional

indicates a course of action permissible within the limits of the document

3.12

recommended

indicates that valid reasons may exist in particular circumstances to ignore a particular item, but the full implications should be understood and carefully weighed before choosing a different course

3.13

required

indicates that the item is an absolute requirement of the specification

3.14

shall

indicates requirements to be followed strictly to conform to the document and from which no deviation is permitted

3.15

shall not

indicates requirements to be followed strictly to conform to the document and from which no deviation is permitted

3.16

should

indicates that among several possibilities, one is recommended as particularly suitable, without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required

3.17

should not

indicates that a certain possibility or course of action is deprecated but not prohibited

4 Symbols and Abbreviated Terms

The following symbols and abbreviations are used in this document.

4.1

I^2C

Inter-Integrated Circuit

4.2
IANA
Internet Assigned Numbers Authority

4.3
ID
identifier

4.4
kHz
kilohertz

4.5
MCTP
Management Component Transport Protocol

4.6
NC-SI
Network Controller Sideband Interface

4.7
PCI
peripheral component interconnect

4.8
PCIe
PCI Express

4.9
PLDM
Platform Level Data Model

4.10
RMII
Reduced Media Independent Interface

4.11
SMBus
System Management Bus

4.12
USB
universal serial bus

4.13
VDM
Vendor Defined Message

5 MCTP Message Type Codes

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

NOTE: A device that supports a given message type may not support that message type equally across all busses that connect to the device.

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 the *MCTP Base Specification*.
Platform Level Data Model	0x01	Reserved for future Platform Level Data Model (PLDM) Message Type
NC-SI over MCTP	0x02	Reserved for NC-SI over MCTP Message Type
Vendor Defined – PCI	0x7E	Message type used to support VDMs where the vendor is identifed using a PCI-based vendor ID. The specification of the initial Message Header bytes for this message type is provided within this specification. The specification of the format of this message is given in the *MCTP Base Specification*. 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 identifed using an IANA-based vendor ID. This format uses an "Enterprise Number" that is assigned and maintained by the Internet Assigned Numbers Authority (IANA), www.iana.org, as the means of identifying a particular vendor, company, or organization. The specification of the format of this message is given in the *MCTP Base Specification*. Otherwise, the message body content is specified by the vendor, company, or organization identified by the given vendor ID.
Reserved	all other	Reserved

6 MCTP Physical Medium Identifiers

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.

Table 2 – MCTP Physical Medium Identifiers

Physical Media Identifier	Description
0x00	Unspecified
0x01	SMBus 2.0 100 kHz compatible
0x02	SMBus 2.0 + I^2C 100 kHz compatible
0x03	I^2C 100 kHz compatible
0x04	I^2C 400 kHz compatible
0x05:0x07	Reserved
0x08	PCIe 1.1 compatible
0x09	PCIe 2.0 compatible
0x0A	PCIe 2.1 compatible
0x0B	PCIe 3.0 compatible
0x0C:0x0E	Reserved
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
0x11	USB 2.0 compatible
0x12	USB 3.0 compatible
0x13:0x17	Reserved
0x18	RMII / NC-SI
0x20	KCS / Legacy
0x21	KCS / PCI
0x22	Serial Host / Legacy (Fixed Address Decoding)
0x23	Serial Host / PCI (Base Class 7 Subclass 0)
0x24	Asynchronous Serial (Between MCs and IMDs)
all other identifiers	Reserved

7 MCTP Physical Transport Binding Identifiers

Table 3 defines as 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.

Table 3 – MCTP Physical Transport Binding Identifiers

MCTP Physical Transport Binding Identifier	Description
0x00	Reserved
0x01	MCTP over SMBus (MCTP SMBus-I^{2}C)
0x02	MCTP over PCIe VDM (MCTP PCIe-V)
0x03	Reserved for MCTP over USB
0x04	MCTP over KCS
0x05	MCTP over Serial
0xFF	Vendor defined NOTE: A vendor-defined transport binding shall meet the requirements of the *MCTP Base Specification* (in particular, when being bridged to or from standard MCTP transport binding and media combinations).
all other identifiers	Reserved

Annex A
(informative)

Change Log

Version	Date	Author	Description
1.0.0	07/28/2009		DMTF Standard Release