

UCSI ENGINEERING CHANGE NOTICE FORM

Title: Addition of USCI_CHUNKING_SUPPORT Command
Applied to: USCI Specification Version 2.0 Revision 1

Brief description of the functional changes:

This command is for OPM to determine if LPM/PPM support chunking, and what size of chunking is supported

Benefits as a result of the changes:

To be able to support all types of LPM/PPMs that might have payload size limitations

An assessment of the impact to the existing revision and systems that currently conform to the USB specification:

An analysis of the hardware implications:

An analysis of the software implications:

An analysis of the compliance testing implications:

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Actual Change

(a). A.1, Page 83, Table A-1

From Text:

Command	Value
RESERVED	0x00
PPM_RESET	0x01
CANCEL	0x02
CONNECTOR_RESET	0x03
ACK_CC_CI	0x04
SET_NOTIFICATION_ENABLE	0x05
GET_CAPABILITY	0x06
GET_CONNECTOR_CAPABILITY	0x07
SET_CCOM	0x08
SET_UOR	0x09
SET_PDM (obsolete)	0x0A
SET_PDR	0x0B
GET_ALTERNATE_MODES	0x0C
GET_CAM_SUPPORTED	0x0D
GET_CURRENT_CAM	0x0E
SET_NEW_CAM	0x0F
GET_PDOS	0x10
GET_CABLE_PROPERTY	0x11
GET_CONNECTOR_STATUS	0x12
GET_ERROR_STATUS	0x13
SET_POWER_LEVEL	0x14
GET_PD_MESSAGE	0x15
GET_ATTENTION_VDO	0x16
Reserved	0x17
GET_CAM_CS	0x18
LPM_FW_UPDATE_REQUEST	0x19
SECURITY_REQUEST	0x1A
SET_RETIMER_MODE	0x1B
SET_SINK_PATH	0x1C

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To Text:

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CANCEL	0x02
CONNECTOR_RESET	0x03
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SET_NOTIFICATION_ENABLE	0x05
GET_CAPABILITY	0x06
GET_CONNECTOR_CAPABILITY	0x07
SET_CCOM	0x08
SET_UOR	0x09
SET_PDM (obsolete)	0x0A
SET_PDR	0x0B
GET_ALTERNATE_MODES	0x0C
GET_CAM_SUPPORTED	0x0D
GET_CURRENT_CAM	0x0E
SET_NEW_CAM	0x0F
GET_PDOS	0x10
GET_CABLE_PROPERTY	0x11
GET_CONNECTOR_STATUS	0x12
GET_ERROR_STATUS	0x13
SET_POWER_LEVEL	0x14
GET_PD_MESSAGE	0x15
GET_ATTENTION_VDO	0x16
Reserved	0x17
GET_CAM_CS	0x18
LPM_FW_UPDATE_REQUEST	0x19
SECURITY_REQUEST	0x1A
SET_RETIMER_MODE	0x1B
SET_SINK_PATH	0x1C
CHUNKING_SUPPORT	0x1F

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(b). Section Y.Y.Y, Page x, Figure/Table x-x

New Text:

Y.Y.Y CHUNKING_SUPPORT (O)

This command is used by the OPM to determine PPM/LPMs maximum chunking size used for UCSI MESSAGE_IN and MESSAGE_OUT.

If the LPM/PPM does not support chunking, the *Not Supported Indicator* field shall be set in the CCI Data structure. If the Not Support Indicator is set, the LPM/OPM shall support **chunking up to** the maximum payload size for the current UCSI specification defined in the Data Structure Table for MESSAGE_IN and MESSAGE_OUT.

It is recommended for systems with more than one LPM to not use LPMs with a different *Chunking size*.

It is recommended for LPMs to use the chunking size equal to the size of the current MESSAGE_IN/MESSAGE_OUT specified in the UCSI version that the LPM/PPM supports or not less than 16 bytes (size of MESSAGE_IN/MESSAGE_OUT in the UCSI 1.2).

Table X-XX: CHUNKING_SUPPORT Command

Offset (Bits)	Field	Size (Bits)	Description
0	<i>Command</i>	8	This field shall be set to CHUNKING_SUPPORT.
8	<i>Data Length</i>	8	Set to 0x00.
16	<i>Connector Number</i>	7	This field shall be set to the connector being queried. If this field is set to zero, the PPM may broadcast this command to all LPMs and reply to the OPM with the lowest <i>Chunking Size</i>
23	<i>Reserved</i>		Reserved and shall be set to zero.

On successful completion of the command the PPM shall set the CCI Data Structure as described in Table Y-Y0.

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Table Y-YY: CHUNKING_SUPPORT Status

Offset (Bits)	Field	Size (Bits)	Description
0	<i>Reserved</i>	1	Reserved and shall be set to zero.
1	<i>Connector Change Indicator</i>	7	If an asynchronous event occurred on a connector then the PPM shall set this field to the connector number on which the change occurred.
8	<i>Data Length</i>	8	Set to 0x00.
16	<i>Reserved</i>	7	Reserved and shall be set to zero.
23	<i>Security Request Indicator</i>	1	Set to 0b
24	<i>FW Update Request Indicator</i>	1	Set to 0b
25	<i>Not Supported Indicator</i>	1	Set to 0b if LPM/PPM supports chunking. Otherwise set this field to 1b.
26	<i>Cancel Completed Indicator</i>	1	Set to 0b.
27	<i>Reset Completed Indicator</i>	1	Set to 0b.
28	<i>Busy Indicator</i>	1	Set to 0b. If the PPM is Busy then the PPM shall set this field to a 1b and all other fields to zero.
29	<i>Acknowledge Command Indicator</i>	1	Set to 0b.
30	<i>Error Indicator</i>	1	If the command was not successfully completed the PPM shall set this field to 1b.
31	<i>Command Completed Indicator</i>	1	Set this field to a 1b.

If the command completed successfully then the PPM shall set the MESSAGE IN Data Structure as described in the following table.

Table X-XX: CHUNKING_SUPPORT Data

Offset (Bits)	Field	Size (Bits)	Description
0	<i>Chunking Size</i>	8	Maximum chunking size in bytes supported by LPM/PPM. The OPM may use any chunking size up to the maximum reported by the field.

From Text:

Table 4-65: *bmOptionalFeatures* Field Description

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Bit	Description
0	SET_CCOM supported
1	SET_POWER_LEVEL supported*
2	Alternate mode details supported
3	Alternate mode override supported
4	PDO details supported
5	Cable details supported
6	External supply notification supported
7	PD reset notification supported
8	GET_PD_MESSAGE supported
9	Get Attention VDO
10	FW Update Request
11	Negotiated Power Level Change
12	Security Request
13	Set Re-timer Mode

To Text:

Table 4-65: *bmOptionalFeatures* Field Description

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0	SET_CCOM supported
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11	Negotiated Power Level Change
12	Security Request
13	Set Re-timer Mode
TBD	Chunking Support

K.K.K CHUNKING Supported

This feature indicates that the PPM supports the chunking of MESSAGE_IN and MESSAGE_OUT