

# UCSI ENGINEERING CHANGE NOTICE FORM

**Title: Addition of USCI\_CHUNKING\_SUPPORT Command**  
**Applied to: USCI Specification Version 2.0 Revision 1**

<b>Brief description of the functional changes:</b>
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This command is for OPM to determine if LPM/PPM support chunking, and what size of chunking is supported
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<b>Benefits as a result of the changes:</b>
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To be able to support all types of LPM/PPMs that might have payload size limitations
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<b>An assessment of the impact to the existing revision and systems that currently conform to the USB specification:</b>
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<b>An analysis of the hardware implications:</b>
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<b>An analysis of the software implications:</b>
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<b>An analysis of the compliance testing implications:</b>
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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:

Command	Value
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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
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. <b>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></b>
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. <b>The OPM may use any chunking size up to the maximum reported by the field.</b>

## 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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10	FW Update Request
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