# USB Power Delivery ENGINEERING CHANGE NOTICE

## Title: Language Relating to VDM Commands
## Applied to: USB Power Delivery Specification Revision 2.0 V1.2

**Brief description of the functional changes:**

Clarify the language involved in VDM Commands. Request/Initiator/Response/Responder etc

**Benefits as a result of the changes:**

Should prevent compliance failures caused simply by misunderstandings of the Specification language.

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

None

**An analysis of the hardware implications:**

None

**An analysis of the software implications:**

None

**An analysis of the compliance testing implications:**

As above - prevents unnecessary failures.

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## Actual Change

### (a). Section 6.4.4.2, Page 171, Table 6-19

#### From Text:

Table 6-19 Structured VDM Header

| Bit(s) | Field | Description |
|---|---|---|
| B31..16 | Standard or Vendor ID (SVID) | Unique 16 bit unsigned integer, assigned by the USB-IF |
| B15 | VDM Type | 1 = Structured VDM |
| B14..13 | Structured VDM Version | Version Number of the Structured VDM (not this specification Version):<br>• Version 1.0 = 0<br>• Values 1-3 are *Reserved* and shall not be used |
| B12..11 | *Reserved* | For Commands 0..15 shall be set to 0 and shall be *Ignored*<br>SVID Specific Commands (16..31) defined by the SVID. |
| B10..8 | Object Position | For the *Enter Mode, Exit Mode* and *Attention* Commands:<br>• 000b = *Reserved* and shall not be used.<br>• 001b..110b = Index into the list of VDOs to identify the desired Mode VDO<br>• 111b = Exit all Active Modes (equivalent of a power on reset). Shall only be used with the *Exit Mode* Command.<br>Commands 0..3, 7..15:<br>• 000b<br>• 001b..111b = *Reserved* and shall not be used.<br>SVID Specific Commands (16..31) defined by the SVID. |
| B7..6 | Command Type | 00b = Initiator<br>01b = Responder ACK<br>10b = Responder NAK<br>11b = Responder BUSY |
| B5 | *Reserved* | Shall be set to 0 and shall be *Ignored* |
| B4..0 | Command[1] | 0 = *Reserved* , shall not be used<br>1 = *Discover Identity*<br>2 = *Discover SVIDs*<br>3 = *Discover Modes*<br>4 = *Enter Mode*<br>5 = *Exit Mode*<br>6 = *Attention*<br>7-15 = *Reserved* , shall not be used<br>16..31 = SVID Specific Commands |
| Note 1: In the case where a SID is used the modes are defined by a standard. When a VID is used the modes are defined by the Vendor. | | |

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## To Text:

Table 6-19 Structured VDM Header

| Bit(s) | Field | Description |
|---|---|---|
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| B12..11 | *Reserved* | For Commands 0..15 shall be set to 0 and shall be *Ignored*<br>SVID Specific Commands (16..31) defined by the SVID. |
| B10..8 | Object Position | For the *Enter Mode, Exit Mode* and *Attention* Commands (Requests /Responses):<br>• 000b = *Reserved* and shall not be used.<br>• 001b..110b = Index into the list of VDOs to identify the desired Mode VDO<br>• 111b = Exit all Active Modes (equivalent of a power on reset).  Shall only be used with the *Exit Mode* Command.<br>Commands 0..3, 7..15:<br>• 000b<br>• 001b..111b = *Reserved* and shall not be used.<br>SVID Specific Commands (16..31) defined by the SVID. |
| B7..6 | Command Type | 00b = REQ (Request from Initiator Port)<br>01b = ACK (Acknowledge Response from Responder Port)<br>10b = NAK (Negative Acknowledge Response from Responder Port)<br>11b = BUSY (Busy Response from Responder Port) |
| B5 | *Reserved* | Shall be set to 0 and shall be *Ignored* |
| B4..0 | Command[1] | 0 = *Reserved* , shall not be used<br>1 = *Discover Identity*<br>2 = *Discover SVIDs*<br>3 = *Discover Modes*<br>4 = *Enter Mode*<br>5 = *Exit Mode*<br>6 = *Attention*<br>7-15 = *Reserved* , shall not be used<br>16..31 = SVID Specific Commands |
| Note 1: In the case where a SID is used the modes are defined by a standard.  When a VID is used the modes are defined by the Vendor. | | |

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## (b). Section 6.4.4.2.4, Page 173

### From Text:

This field shall be set to zero when not required by the Command.

### To Text:

This field shall be set to zero in the Request or Response (REQ, ACK, NAK or BUSY) when not required by the specification of the individual Command.