

USB Power Delivery ENGINEERING CHANGE NOTICE

Title: Support for Asymmetric Mode

**Applied to: USB Power Delivery Specification Revision 3.1
Version 1.5**

Brief description of the functional changes proposed:
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Adds a bit in the existing active cable VDO2 to provide a means for an active cable to advertise that it supports the asymmetric mode. Normal active cables are already required to support asymmetric mode, but it is optional for the OIAC. Adding this bit provides a common means for all active cables to declare support for asymmetric mode.

Benefits as a result of the proposed changes:
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Provides drivers a means to understand of that an active cable supports asymmetric operation.

An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
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None. This is a new feature.

An analysis of the hardware implications:
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None.

An analysis of the software implications:
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None. Asymmetric operation is a new feature.
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An analysis of the compliance testing implications:
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Minimal.

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Actual Change Requested

(a). Section 6.4.4.3.1.7, Page 166, Table 6-43

From Text:

B1	<i>Reserved</i>	<i>Shall</i> be set to zero.
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To Text:

B1	USB4 Asymmetric Mode Supported	0b = No 1b = Yes Shall be set to 0 if asymmetry is not supported.
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(b). Section 6.4.4.3.1.7.26, Page 167

From Text:

The Optically Isolated Active Cable field (B2) *Shall* indicate whether this cable is an optically isolated active cable or not (as defined in [USB Type-C 2.1]). Optically Isolated Active Cables *Shall* have a retimer as the active element and do not support [USB 2.0] or carry V_{BUS} .

To Text:

The Optically Isolated Active Cable field (B2) *Shall* indicate whether this cable is an optically isolated active cable or not (as defined in [USB Type-C 2.1]). Optically Isolated Active Cables *Shall* have a retimer or linear redriver (LRD) as the active element and do not support [USB 2.0] or carry V_{BUS} .

(c). Section 6.4.4.3.1.7.27, Page 167

New Text:

6.4.4.3.1.7.27 USB4 Asymmetric Mode Supported Field

The USB4 Asymmetric Mode Supported field (B1) *Shall* indicate that the active cable supports asymmetric mode as defined in [USB4] and [USB Type-C 2.1].