

USB4 2.0 ENGINEERING CHANGE NOTICE FORM

Title: CLx Objection Removal for Gen T Disabled Links Applied to: USB4 2.0 Specification

Brief description of the functional changes:

- When USB3 software transitions Gen T Downstream Ports to Disabled state, it is clear that neither the Downstream Gen T Port nor the Gen T Upstream Port will be transferring any traffic that will disturb CLx residency.
- Current set of CLx Objections will not permit CLx entry even in the case where every Gen T Downstream port is in LTSSM.DISABLED state. This ECR expands CLx Objection removal for Gen T ports in Disabled state.

Benefits as a result of the changes:

Provide more CLx entry opportunities.

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

N/A.

An analysis of the hardware implications:

CLx entry requirements are becoming more relaxed.

An analysis of the software implications:

N/A.

An analysis of the compliance testing implications:

N/A.

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Actual Change

(a). Section 4.2.1.6.3

From Text (for CL2):

- The Lane 0 Adapter is referenced in an *Egress Adapter* field of a USB3 Gen T Adapter's Routing Table, and all the USB3 Gen T Ports that are mapped to the USB3 Gen T Adapter are not in U2 or U3 state

To Text:

- The Lane 0 Adapter is referenced in an *Egress Adapter* field of a USB3 Gen T Adapter's Routing Table, and all the USB3 Gen T Ports that are mapped to the USB3 Gen T Adapter are not in **Disabled**, U2 or U3 state

(b). Section 4.2.1.6.3

From Text (for CL1):

- The Lane 0 Adapter is referenced in an *Egress Adapter* field of a USB3 Gen T Adapter's Routing Table, and all the USB3 Gen T Ports that are mapped to the USB3 Gen T Adapter are not in U2 or U3 state

To Text:

- The Lane 0 Adapter is referenced in an *Egress Adapter* field of a USB3 Gen T Adapter's Routing Table, and all the USB3 Gen T Ports that are mapped to the USB3 Gen T Adapter are not in **Disabled**, U2 or U3 state