

USB4 1.0 ENGINEERING CHANGE NOTICE FORM

Title: Allowing tTxOff after Sending 375 CLx_ACK
Applied to: USB4 Specification Version 1.0

Brief description of the functional changes:

A more complete description and requirement on the Responding Port when entering Low Power States in Gen 2/3 Link.
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Benefits as a result of the changes:

Allows the same shut down mechanism for both Requisition and Responding Ports.
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An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
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None.

An analysis of the hardware implications:
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None.

An analysis of the software implications:
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None.

An analysis of the compliance testing implications:
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None.

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Actual Change Requested

(a). 4.2.1.6.1.2 – Entry to State (Low Power States Gen 2/3)

To Text:

- Else, if the Responding Port does not assert an objection to enter CL2 state, it shall respond to CL2_REQ Ordered Sets with a CL2_ACK Ordered Set. The first CL2_ACK shall be sent within tCLxRequest after receiving the request. The CL2_ACK Ordered Set shall be sent 375 times. After the last CL2 ACK, the Responding Port shall shut down its transmitter within tTxOff time. The Adapter may send additional CL2 ACK Ordered Sets during the tTxOff period.
 - If RS-FEC is enabled, the transmitter may shut down before the current RS FEC block ends.
- Else, if the Responding Port does not assert an objection to enter CL1 state, it shall respond to CL2_REQ or CL1_REQ Ordered Sets with a CL1_ACK Ordered Set. The first CL1_ACK shall be sent within tCLxRequest after receiving the request. The CL1_ACK Ordered Set shall be sent 375 times. After the last CL1 ACK, the Responding Port shall shut down its transmitter within tTxOff time. The Adapter may send additional CL1 ACK Ordered Sets during the tTxOff period.
 - If RS-FEC is enabled, the transmitter may shut down before the current RS FEC block ends.