

USB4 1.0 ENGINEERING CHANGE NOTICE FORM

Title: Adding Timeout for Sending LFPS on CLx Exit
Applied to: USB4 Specification Version 1.0

Brief description of the functional changes:

Adds a timeout for sending LFPS to avoid hang state on CLx exit

Benefits as a result of the changes:

Robust CL1/2 exit flow

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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Adding a timeout for CLx FSM

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

(a). Section 4.2.1.6.5.2, Page 161

From Text:

1. Send a Low Frequency Periodic Signaling (LFPS) burst on each Lane until the receiver detects LFPS.

To Text:

1. Send a Low Frequency Periodic Signaling (LFPS) burst on each Lane until the receiver detects LFPS. **If the receiver did not detect LFPS after tTrainingAbort2 time the Router shall initiate a Disconnect by driving SBTX to a logical low state for a minimum of tDisconnectTx.**

(b). Section 4.2.1.6.5.3, Page 162

From Text:

1. Send a Low Frequency Periodic Signaling (LFPS) burst on each Lane until the receiver detects LFPS.

To Text:

1. Send a Low Frequency Periodic Signaling (LFPS) burst on each Lane until the receiver detects LFPS. **If the receiver did not detect LFPS after tTrainingAbort2 time the Router shall initiate a Disconnect by driving SBTX to a logical low state for a minimum of tDisconnectTx.**

(c). Section 4.6, Page 191

From Text:

tTrainingAbort2	The amount of time in Training state following any transition to Training state other than from CLd state.	100	--	ms
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To Text:

tTrainingAbort2	The amount of time in Training state following any transition to Training state other than from CLd state and time to send LFPS when exiting CL1 or CL2	100	--	ms
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