ONFI Technical Errata

Errata ID	**021**
Affected Spec Ver.	**ONFI 3.0, 3.1, 3.2, 4.0**
Corrected Spec Ver.	

Submission info

Name	Company	Date
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This errata changes tWPSTH minimum parameter value for NV-DDR2/3 from 15NS to 25NS. This aligns the value across industry specifications. This errata also adds additional SDR timing requirement from when ODT Configure command until next command is issued.

Description of the specification change

Modify Section 14.8.3 "NV-DDR2/NV-DDR3" Table 88 shown below:

Constant Timing Parameter Values			
	Min	Max	Unit
tWPSTH	~~15~~ 25	—	ns

Table 1 NV-DDR2 / NV-DDR3 Timing Parameter Values: Data Input

Modify Section 4.4: "NV-DDR / NV-DDR2 / NV-DDR3 and Repeat Bytes" shown below:

The commands that repeat each data byte twice in the NV-DDR, NV-DDR2 and NV-DDR3 data interfaces are: Set Features, Read ID, Get Features, Read Status, Read Status Enhanced, and ODT Configure. SDR commands may use the highest data transfer rate supported by the device. If an ODT Configure command is not issued using SDR timing mode 0 then host shall wait 40ns prior to issuing the next command cycle.

5.14 Modify Section 5.25: "ODT Configure Definition" shown below:

If ODT Configure is used to specify the Rtt settings for any LUN, then it shall be used to specify the Rtt settings for LUNs on all Volumes. In this case, ODT Configure shall be issued to at least one LUN on each Volume. When an ODT Configure command is issued to at least one LUN on a Volume, the Volume shall begin using the ODT Configuration Matrix for all LUNs on that Volume. The default value for the ODT Matrix is 0000h, i.e., termination is disabled.

When issuing ODT Configure in the SDR data interface the host shall wait 40ns after Data Input cycle for Rtt2 before issuing next command cycle.

When issuing ODT Configure in the NV-DDR2 or NV-DDR3 data interface, each data byte is transmitted twice. The device shall only latch one copy of each data byte. This command shall not be issued when using the NV-DDR data interface. See section 0.

When this command is issued and the NV-DDR2 or NV-DDR3 data interface is enabled, then the updated termination settings take effect immediately. The host should take care when modifying these settings to avoid any signal integrity issues. If issues occur when the NV-DDR2 interface is enabled, then it is recommended to transition to the SDR data interface, make the appropriate updates to the termination settings, and then transition back to the NV-DDR2 data interface. . If issues occur when NV-DDR3 interface is enabled, then it is recommended to transition to a slower timing mode, make the appropriate updates to the termination settings, and then transition back to the faster NV-DDR3 timing mode.

Disposition log

10/12/2016	Erratum captured.

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