July 23, 2018

Subject: PCN#05A-18 Notification of Changes to CrossLink™ Data Sheets

Dear Lattice Customer,

Lattice Semiconductor is providing this notification of changes to the CrossLink™ Family Data Sheet (FPGA-DS-02007) and CrossLink ™ Automotive Family Data Sheet (FPGA-DS-02013).

Change Description

The new CrossLink Family Data Sheet (FPGA-DS-02007 Version 1.5 dated July 2018) and CrossLink Automotive Family Data Sheet (FPGA-DS-02013 Version 1.4 dated July 2018) added a new note #4 to Table 4.1 and a new note #3 to Table 4.2 of both Data Sheets:

Table 4.1. Absolute Maximum Ratings

Symbol	Parameter	Min	Max
V_{CCAUX}	Auxiliary Supply Voltage for Bank 1, 2 and NVCM - @ 2.5 V[4]	- 0.5 V	2.75 V
	Auxiliary Supply Voltage for Bank 1, 2 and NVCM - @ 3.3 V[4]	- 0.5 V	3.63 V

Notes:

4. V_{CCAUX} must be set to 2.5 V when an external I^2C Master or SPI Master is used to program CrossLink's NVCM. This restriction is not applicable for read access of the NVCM such as Self-Download Mode where the NVCM is already programmed and CrossLink retrieves the bitstream from the NVCM and programs it to the SRAM memory.

Table 4.2. Recommended Operating Conditions

Symbol	Parameter	Min	Max
V_{CCAUX}	Auxiliary Supply Voltage for Bank 1, 2 and NVCM - @ 2.5 V[3]	2.375 V	2.625 V
	Auxiliary Supply Voltage for Bank 1, 2 and NVCM - @ 3.3 V[3]	3.135 V	3.465 V

Notes:

3. V_{CCAUX} must be set to 2.5 V when an external I^2C Master or SPI Master is used to program CrossLink's NVCM. This restriction is not applicable for read access of the NVCM such as Self-Download Mode where the NVCM is already programmed and CrossLink retrieves the bitstream from the NVCM and programs it to the SRAM memory.

See the data sheet revision history for other clarifications and changes.

There will be no changes to Diamond™ 3.10 software relating to this data sheet change.

Affected Products

The Ordering Part Numbers (OPNs) affected by this PCN are as follows:

LIA-MD6000-6MG81E

LIA-MD6000-6JMG80E

LIA-MD6000-6KMG80E

LIF-MD6000-6UWG36ITR

LIF-MD6000-6UMG64I

LIF-MD6000-6MG81I

LIF-MD6000-6JMG80I

LIF-MD6000-6KMG80I

Note: This PCN also affects all package, grade and tape/reel options and any custom devices (i.e. factory programmed, special test, etc.) which are derived from any of the devices listed above.

Datasheet Specifications

The updated CrossLink Family Data Sheet (FPGA-DS-02007 Version 1.5 dated July 2018) and CrossLink Automotive Family Data Sheet (FPGA-DS-02013 Version 1.4 dated July 2018) with the above changes are available on the Lattice website.

Recommended Action

The updates described in this PCN only apply to designs that program CrossLink's NVCM on the PCB. If the application does not utilize CrossLink's NVCM, such as using an external I^2C Master or SPI Master to program CrossLink's NVCM, no action is required.

If the application uses an external I^2C Master or SPI Master to program CrossLink's NVCM and V_{CCAUX} is set to 2.5 V, no action is required.

If the application uses an external I^2C Master or SPI Master to program CrossLink's NVCM and V_{CCAUX} is set to 3.3 V, customers should either (a) program CrossLink's NVCM before populating CrossLink onto the PCB or (b) modify the design to set V_{CCAUX} to 2.5 V. Attempting to program CrossLink's NVCM with V_{CCAUX} at 3.3 V will not be successful.

Customers who have further questions regarding this specification change are encouraged to contact local field support or at sales@latticesemi.com.

PCN Timing

The datasheet changes are effective immediately and retroactively. There are no changes to the silicon and therefore samples are not applicable to these data sheet changes.

Sincerely,

Lattice PCN Administration