



July 9, 2010

Subject: PCN# 11A-10, Notification of Change of Ordering Part Number for the LFE3-70E and LFE3-95E to the LFE3-70EA and LFE3-95EA, respectively

Dear Lattice Customer,

In accordance with our Product Change Notification (PCN) policy, Lattice is providing this notification of our intent to convert the LFE3-70E and LFE3-95E ordering part numbers for the LatticeECP3™ FPGA family to the LFE3-70EA and LFE3-95EA, respectively. The “EA” devices fix the errata associated with the “E” devices. Current “E” device designs are pin-for-pin and bitstream compatible with the “EA” devices. You will have 90 days to convert, after which “E” devices will be available only until inventory is depleted.

AFFECTED DEVICES

The Ordering Part Numbers (OPNs) affected by this PCN are listed in Exhibit A.

DATA SHEET SPECIFICATIONS

The new LFE3-70EA and LFE3-95EA devices meet all data sheet performance specifications and are bit-stream compatible with the LFE3-70E and LFE3-95E devices. The “EA” devices fix the errata associated with the “E” devices. The differences between the “E” and “EA” devices are listed in Exhibit B. The LatticeECP3 Family Data Sheet (DS1021 Version 01.6, March 2010) already includes these “EA” devices.

CONVERSION TIMING

New designs must use the “EA” devices. The “E” devices will be available to support demand for 90 days and thereafter only until inventories are exhausted. You are encouraged to notify Lattice of your demand requirements for the “E” devices at your earliest opportunity. Should samples be required to complete evaluation of the new “EA” devices, such sample requests must be received no later than **August 9, 2010** (30 days after the date of this Notice).

CONVERSION TIMING – SUMMARY

- **Sample Request Cut-off Date:** **August 9, 2010**
- **Recommended Conversion Date** **October 8, 2010**

RESPONSE

In accordance with JESD46-C, this change is deemed accepted if no acknowledgement is received within 30 days from this Notice.

Note: Be sure to sign up for PCN “Web Alerts” (See [PCN#13A-09](#) for details) and receive all future Lattice PCNs via e-mail!

CONTACT

If you have any questions or require additional information, please contact pcn@latticesemi.com.

Sincerely,

Lattice Semiconductor PCN Administration

EXHIBIT “A” – “E” to “EA” Conversion Ordering Part Number List

Device	Package	Current Part Number	New / Replacement Part Number
LFE3-70	Pb-Free 672-fpBGA	LFE3-70E-8FN672C	LFE3-70EA-8FN672C
		LFE3-70E-7FN672C	LFE3-70EA-7FN672C
		LFE3-70E-6FN672C	LFE3-70EA-6FN672C
		LFE3-70E-8FN672I	LFE3-70EA-8FN672I
		LFE3-70E-7FN672I	LFE3-70EA-7FN672I
		LFE3-70E-6FN672I	LFE3-70EA-6FN672I
	Pb-Free 484-fpBGA	LFE3-70E-8FN484C	LFE3-70EA-8FN484C
		LFE3-70E-7FN484C	LFE3-70EA-7FN484C
		LFE3-70E-6FN484C	LFE3-70EA-6FN484C
		LFE3-70E-8FN484I	LFE3-70EA-8FN484I
		LFE3-70E-7FN484I	LFE3-70EA-7FN484I
		LFE3-70E-6FN484I	LFE3-70EA-6FN484I
	Pb-Free 1156-fpBGA	LFE3-70E-8FN1156C	LFE3-70EA-8FN1156C
		LFE3-70E-7FN1156C	LFE3-70EA-7FN1156C
		LFE3-70E-6FN1156C	LFE3-70EA-6FN1156C
		LFE3-70E-8FN1156I	LFE3-70EA-8FN1156I
		LFE3-70E-7FN1156I	LFE3-70EA-7FN1156I
		LFE3-70E-6FN1156I	LFE3-70EA-6FN1156I
LFE3-95	Pb-Free 672-fpBGA	LFE3-95E-8FN672C	LFE3-95EA-8FN672C
		LFE3-95E-7FN672C	LFE3-95EA-7FN672C
		LFE3-95E-6FN672C	LFE3-95EA-6FN672C
		LFE3-95E-8FN672I	LFE3-95EA-8FN672I
		LFE3-95E-7FN672I	LFE3-95EA-7FN672I
		LFE3-95E-6FN672I	LFE3-95EA-6FN672I
	Pb-Free 484-fpBGA	LFE3-95E-8FN484C	LFE3-95EA-8FN484C
		LFE3-95E-7FN484C	LFE3-95EA-7FN484C
		LFE3-95E-6FN484C	LFE3-95EA-6FN484C
		LFE3-95E-8FN484I	LFE3-95EA-8FN484I
		LFE3-95E-7FN484I	LFE3-95EA-7FN484I
		LFE3-95E-6FN484I	LFE3-95EA-6FN484I
	Pb-Free 1156-fpBGA	LFE3-95E-8FN1156C	LFE3-95EA-8FN1156C
		LFE3-95E-7FN1156C	LFE3-95EA-7FN1156C
		LFE3-95E-6FN1156C	LFE3-95EA-6FN1156C
		LFE3-95E-8FN1156I	LFE3-95EA-8FN1156I
		LFE3-95E-7FN1156I	LFE3-95EA-7FN1156I
		LFE3-95E-6FN1156I	LFE3-95EA-6FN1156I

Note: This PCN also affects any custom devices (i.e. factory programmed, special test, etc.), which are derived from any of the devices listed above.

EXHIBIT “B” – Differences Between “E” and “EA” devices

E Devices	E and EA Device Functionally Equivalent	EA Devices - Additional Capability
Programming modes restricted to non-encrypted bit streams	Yes: Both the E and EA devices support non-encrypted bitstreams	Enables encrypted bit streams up to 20 MHz.
Slave SPI programming mode not supported	Yes: Both E and EA devices support all other specified programming modes	Enables Slave SPI programming mode
SERDES HDIN P and HDIN N pins pass CDM testing at 300V	Yes: The EA device exceeds this level of ESD protection with CDM testing to >400V	SERDES HDIN P and HDIN N pins pass CDM testing at >400V.
Primary clock tree operating frequency limited to 320 MHz	Yes: Both the E and EA devices support the same minimum operating frequency of XMHz through 320MHz with the EA devices supporting the additional range from 320MHz to 500MHz	Primary clock tree operating to datasheet specification of 500 MHz
PLL ECLK fIN maximum frequency limited to 450 MHz	Yes: Both the E and EA devices support the same minimum operating frequency of XMHz through 450MHz with the EA devices supporting the additional range from 450MHz to 500MHz	PLL ECLK fIN maximum frequency operating to datasheet specification of 500 MHz
DDR3 memory interfaces currently not supported	Yes: Both the E and EA devices support DDR generic and DDR2 interfaces with the EA supporting additional DDR3 interfaces	Allows DDR3 operation with maximum frequency of 400 MHz

Other Notes:

1. Bitstream compression will not be supported in E or EA.
2. SERDES Loss of Signal indicator available in SERDES PCS does not meet PCIe specification in E or EA. A workaround does exist where the LOS can be detected through the Lattice PCIe IP core