

CUSTOMER ADVISORY

ADV1405

Altera® Cyclone® V FPGA Product Family Ordering Information Update

Change Description

Altera® is pleased to announce the completion of qualification and final production release of the Cyclone® V family of FPGA products offered in 301-pin MBGA and 383-pin MBGA packages. Effective immediately, the part numbers listed in the “Affected Part Number” column of Appendix 1 should be ordered using the corresponding production part numbers listed in the “Replacement Standard Part Number” column.

The “Standard” part numbers comply with the current standard of 1.1mm for maximum package thickness. This current standard was adopted with the introduction of the “ES” part numbers. On certain early availability part numbers (part numbers without the “ES” suffix in the “Affected Part Number” column) the maximum package thickness was 0.95mm.

Products Affected

Please refer to Appendix 1 for a listing of part numbers affected.

Recommended Action

Customers are requested to do the following:

- a) Convert any existing “ES” part number orders to “Standard” part number orders.
- b) Update their Material Requirements Planning (MRP), Enterprise Resource Planning (ERP), or engineering documentation systems to specify the “Standard” part numbers on all future orders.
- c) Take note of the current standard for package outlines and dimensions, viewable on the Altera web at URL:
<http://www.altera.com/devicepackaging/04R00464-00.pdf> (301-pin MBGA)
<http://www.altera.com/devicepackaging/04R00465-00.pdf> (383-pin MBGA)

There is no impact to datasheet specifications or electrical performance.

Reason for Change

Altera is implementing the ordering information change to formally phase-in the “Standard” part numbers following qualification completion, and to deactivate the “ES” versions where applicable.

Qualification Data

Qualification data has been collected to ensure that the products meet or exceed Altera’s quality and reliability specifications. This data is summarized in Table 1.

Table 1: Summary of Qualification Data

Qualification Test	Standard	Readout	Results
			# of Failures / Total Samples Tested
Life Test @ 125°C	JESD22-A108	1000 hrs	0 / 90
High Temp Bake @ 150°C	JESD22-A103	1000 hrs	0 / 90
Unbiased HAST (130°C / 85%RH)	JESD22-A110B	96 hrs	0 / 180
Temperature Cycle “B” (-55°C to 125°C)	JESD22-A104D	1000 cyc	0 / 270
Temp Humidity Bias (85°C /85%RH)	JESD22-A101B	1000 hrs	0 / 83
Second Level Reliability (Board Level Temperature Cycle; 0°C to 100°C)	IPC-9701	3500 cyc	0 fails to 3500 cyc

Product Transition Dates

The “Standard” part numbers are available for order entry and ready for shipment. The “ES” part numbers listed in Appendix 1 will continue to be open for transactions on Altera systems until the Last Time Buy (LTB) date specified in Table 1. Customers and Distributors may make use of this LTB period to make the required nomenclature changes and submit change orders or cancel existing ES orders. Authorized Altera distribution partners have until the NC/NR date to submit a Return Material Authorization (RMA) request for any ES inventory to Altera.

Table 1. Key Dates

<i>Milestone</i>	<i>Date</i>
Date “Standard” part numbers are open for order entry and shipment	Now
LTB date for orders using “ES” part numbers	Sept 8, 2014
Date “ES” part number orders become Non-Cancellable, Non-Returnable (NC/NR)	Sept 9, 2014

Contact

Please contact your Altera Sales representative for additional information or support with this ordering part number transition. Visit the URL below to find a sales office in your region:

<http://www.altera.com/corporate/contact/sales/worldwide/con-sales-ww.jsp>

Customer Notifications Subscription

Customers that have subscribed to Altera’s customer notification mailing list will receive updates automatically via email.

If you would like to receive customer notifications by e-mail, please subscribe to our customer notification mailing list at <https://www.altera.com/subscriptions/email/signup/eml-index.jsp>

Revision History

Date	Rev	Description
08/08/2014	1.0.0	Initial Release

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Appendix 1: Affected Ordering Part Numbers

Cyclone V			
Affected Part Number (MBGA-383 Package)	Replacement Standard Part Number	Affected Part Number (MBGA-301 Package)	Replacement Standard Part Number
5CEFA2M13C6N	Same as Affected PN	5CGTFD5F5M11C7N	Same as Affected PN
5CEFA2M13C8N	Same as Affected PN	5CGTFD5F5M11I7N	Same as Affected PN
5CEFA2M13I7N	Same as Affected PN	5CGXFC4F6M11C6N	Same as Affected PN
5CEFA2M13C7N	Same as Affected PN	5CGXFC4F6M11C7N	Same as Affected PN
5CEFA4M13C7N	Same as Affected PN	5CGXFC4F6M11I7N	Same as Affected PN
5CEFA4M13I7N	Same as Affected PN	5CGXFC4F7M11C8N	Same as Affected PN
5CEFA4M13C8N	Same as Affected PN	5CGXFC5F7M11C8N	Same as Affected PN
5CEFA4M13C6N	Same as Affected PN	5CGXFC5F6M11I7N	Same as Affected PN
5CEFA5M13C6N	Same as Affected PN	5CGXFC5F6M11C7N	Same as Affected PN
5CEFA5M13C8N	Same as Affected PN	5CGXFC5F6M11C6N	Same as Affected PN
5CEFA5M13I7N	Same as Affected PN	5CGXFC4F6M11I7	Same as Affected PN
5CEFA5M13C7N	Same as Affected PN	5CGTFD5F5M11C7NES	5CGTFD5F5M11C7N
5CGTFD5C5M13C7N	Same as Affected PN	5CGTFD5F5M11I7NES	5CGTFD5F5M11I7N
5CGTFD5C5M13I7N	Same as Affected PN	5CGXFC4F6M11C7NES	5CGXFC4F6M11C7N
5CGXFC4C6M13C6N	Same as Affected PN	5CGXFC4F7M11C8NES	5CGXFC4F7M11C8N
5CGXFC4C6M13C7N	Same as Affected PN	5CGXFC5F6M11C6NES	5CGXFC5F6M11C6N
5CGXFC4C7M13C8N	Same as Affected PN	5CGXFC5F6M11C7NES	5CGXFC5F6M11C7N
5CGXFC4C6M13I7N	Same as Affected PN	5CGXFC5F6M11I7NES	5CGXFC5F6M11I7N
5CGXFC5C6M13I7N	Same as Affected PN	5CGXFC4F6M11I7NES	5CGXFC4F6M11I7N
5CGXFC5C7M13C8N	Same as Affected PN		
5CGXFC5C6M13C7N	Same as Affected PN		
5CGXFC5C6M13C6N	Same as Affected PN		
5CEFA4M13C7NES	5CEFA4M13C7N		
5CEFA4M13C8NES	5CEFA4M13C8N		
5CEFA5M13I7NES	5CEFA5M13I7N		
5CEFA4M13I7NES	5CEFA4M13I7N		

Notes

- 1) “PN” = Part Number
- 2) The part numbers without the “ES” suffixes in the “Affected Part Number” column were previously in compliance with a 0.95mm maximum package thickness standard, and effective immediately, will comply with the new standard of 1.1mm maximum.
- 3) The part numbers with the “ES” suffix in the “Affected Part Number” column have always been in compliance with the 1.1mm maximum package thickness standard, and will continue to comply with this standard.