Flash Wafer Fabrication Change and Gold (Au) To Copper (Cu) Transition for Spartan-3AN FPGA Devices

XCN14003 (v1.3) October 27, 2014 **Product Change Notice**

Overview

The purpose of this notification is to communicate a change in wafer fabrication facility location and process technology (non-optical) shrink from 0.13um to 0.11um for the in-system flash memory used in the Spartan®-3AN FPGA devices. In addition, Xilinx is transitioning the wire bond packages from gold (Au) to copper (Cu) wires meeting industry trends.

Description

Xilinx is transitioning the in-system flash memory for the Spartan-3AN FPGA devices from wafer fabrication facility X-FAB (0.13um process) to UMC (0.11um process). Xilinx is performing the qualification and characterization on the Spartan-3AN FPGA devices which include the in-system flash with 0.11um process. Form, fit, and function will not be affected with this change. Ancillary programming algorithm changes are specified in the Xilinx Answer 59572.

To align with the current industry trends and Xilinx product line strategy, we will transition the Spartan-3AN FPGA family from gold (Au) to copper (Cu) wire. This change will not affect fit, form, function or MSL rating of the wire bond packages. Xilinx has successfully implemented Spartan®-3/-3E/-3A with copper wire since August 2011, please refer to XCN11002. For the Cu-wire assembly, only halogen free, EU-ROHS compliant package and green mold compound will be used. The package does not contain published REACH SvHC materials.

Products Affected

This change affects all speed, package, and temperature variations of the commercial (C) and industrial (I) grade devices. Automotive (XA) and Hi-Rel (XQ) devices are not affected by this Product Change Notice. Affected part numbers are included in the following Table 1:

Table 1: **Spartan-3AN FPGA Device/Package Affected**

Device	Package
XC3S50AN(2)	TQ(G)144
XC3S200AN	FT(G)256
XC3S400AN	FT(G)256
	FG(G)400
XC3S700AN	FG(G)484
XC3S1400AN(2)	FG(G)676

Notes:

1. Please refer to the Xilinx Answer 59572 for ancillary programming algorithm changes.
2. Certain parts under XC3S50AN and XC3S1400AN devices have been discontinued; please refer to XCN13016. The parts affected by XCN13016 are not affected by this Product Change Notice.

Table 2: **Spartan-3AN FPGA Family Product Affected**

Part Number	Part Number	Part Number	Part Number
XC3S50AN-4TQ144C4100	XC3S200AN-5FT256C	XC3S400AN-5FGG400C	XC3S1400AN-4FG676I
XC3S50AN-4TQ144I4100	XC3S200AN-5FTG256C	XC3S400AN-5FT256C	XC3S1400AN-4FG676I4301
XC3S50AN-4TQG144C	XC3S400AN-4FG400C	XC3S400AN-5FTG256C	XC3S1400AN-4FGG676C
XC3S50AN-4TQG144I	XC3S400AN-4FG400I	XC3S700AN-4FG484C	XC3S1400AN-4FGG676C4301
XC3S50AN-5TQG144C	XC3S400AN-4FGG400C	XC3S700AN-4FG484I	XC3S1400AN-4FGG676I
XC3S200AN-4FT256C	XC3S400AN-4FGG400I	XC3S700AN-4FGG484C	XC3S1400AN-4FGG676I4301
XC3S200AN-4FT256I	XC3S400AN-4FT256C	XC3S700AN-4FGG484I	XC3S1400AN-5FG676C
XC3S200AN-4FTG256C	XC3S400AN-4FT256I	XC3S700AN-5FG484C	XC3S1400AN-5FG676C4301
XC3S200AN-4FTG256C0862	XC3S400AN-4FTG256C	XC3S700AN-5FGG484C	XC3S1400AN-5FGG676C
XC3S200AN-4FTG256I	XC3S400AN-4FTG256I	XC3S1400AN-4FG676C	XC3S1400AN-5FGG676C4301
XC3S200AN-4FTG256I0913	XC3S400AN-5FG400C	XC3S1400AN-4FG676C4301	

Key Date and Cross Shipping Information

Current and new product cutover will begin as indicated in FAQ (XTP343) Table 1. Dates may be subjected to change based on customer demand and or usage.

Qualification Data

Qualification data is available upon request.

Response

No response is required. For additional information or questions, please contact Xilinx Technical Support.

Important Notice: Xilinx Customer Notifications (XCNs, XDNs, and Quality Alerts) can be delivered via e-mail alerts sent by the Support website (http://www.xilinx.com/support). Register today and personalize your "Documentation and Design Advisory Alerts" area to include Customer Notifications. Xilinx Support provides many benefits, including the ability to receive alerts for new and updated information about specific products, as well as alerts for other publications such as data sheets, errata, application notes, etc. For information on how to sign up, refer to Answer Record 18683: http://www.xilinx.com/support/answers/18683.htm.

Additional Documentation

XTP343 - FAQ: Implications of XCN14003
https://secure.xilinx.com/webreg/clickthrough.do?cid=370908.

Revision History

The following table shows the revision history for this document:

Date	Version	Description of Revisions
05/05/2014	1.0	Initial release.
05/26/2014	1.1	(Pg. 1) Added the XC3S700AN: Impacted by the ancillary programming algorithm changes.
10/06/2014	1.2	Updated reference to Xilinx Answer 59572 for ancillary programming changes for all affected devices.
10/27/2014	1.3	Rewrite the key date and cross shipping information. Add FAQ (XTP343) for additional documentation.

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