



Package Bill of Material Gold (Au) To Copper (Cu) Wire Change For Automotive (XA) Spartan-3/-3E/-3A/ -3A DSP And (XA) Spartan-6 FPGA Products

XCN15005 (v1.0) July 6, 2015

Product Change Notice

Overview

The purpose of this notification is to announce the transitioning of all wire bond package types for Automotive “XA” Spartan®-3/-3E/-3A/-3A DSP and Spartan®-6 FPGA products from gold (Au) to copper (Cu) wire. This change will not affect fit, form, function or MSL rating of the packages.

Description

Xilinx will be transitioning all wire bond package types for Automotive “XA” Spartan-3/-3E/-3A/-3A DSP and Spartan-6 FPGA products from gold (Au) to copper (Cu) wire. For the Cu-wire assembly, only halogen free, EU-ROHS compliant packages and green mold compound will be used. These packages do not contain published REACH SvHC materials.

Xilinx is converting to copper wire in order to align with the current industry trend to better support long-term demand for the affected products. Copper wire has demonstrated better electrical and mechanical performance than gold wire. Xilinx assembly suppliers have qualified copper wire technology and have been using it in high volume production since 2008. Xilinx has successfully implemented Spartan-3/-3E/-3A/-3AN/-3A DSP with copper wire for “XC” commercial (C) and industrial (I) grade product families since August 2011 (please refer to [XCN11002](#), [XCN14001](#), and [XCN14003](#)).

In addition, Xilinx is also changing passivation material on the Spartan-6 wafers from SMAS5010 to HD4104 material. The reason for change is to align with industry best practice and secure equipment capacity. Xilinx is currently using the proposed new material for 7 Series FPGA products and is in mature production phase.

This change will not affect fit, form, function or MSL rating of the packages. Any planned capacity expansion will be for copper wire packages only.

Products Affected

This change affects all speed, package, and temperature variations of Automotive “XA” grade product families mentioned in the title and overview. Defense-grade “XQ” product are not affected. Affected device packages are included in the [Table 1](#), [Table 2](#), [Table 3](#), [Table 4](#), and [Table 5](#).

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Table 1: Spartan-3 FPGAs Automotive Devices Packages Affected

Device	Package-Pin	Device	Package-Pin
XA3S50	VQ(G)100	XA3S400	PQ(G)208
	CP(G)132		FT(G)256
	TQ(G)144		FG(G)456
XA3S200	VQ(G)100	XA3S1000	FG(G)456
	PQ(G)208		FG(G)676
	FT(G)256	XA3S1500	FG(G)676

Table 2: Spartan-3E FPGAs Automotive Devices Packages Affected

Device	Package-Pin	Device	Package-Pin
XA3S100E	VQ(G)100	XA3S500E	CP(G)132
	CP(G)132		PQ(G)208
	TQ(G)144		FT(G)256
XA3S250E	VQ(G)100	XA3S1200E	FT(G)256
	CP(G)132		FG(G)400
	TQ(G)144	XA3S1600E	FG(G)400
	PQ(G)208		FG(G)484
FT(G)256			

Table 3: Spartan-3A FPGAs Automotive Devices Packages Affected

Device	Package-Pin
XA3S200A	FT(G)256
XA3S400A	FT(G)256
	FG(G)400
XA3S700A	FG(G)400
	FG(G)484
XA3S1400A	FG(G)484

Table 4: Spartan-3A-DSP FPGAs Automotive Devices Packages Affected

Device	Package-Pin
XA3SD1800A	CS(G)484
	FG(G)676

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Table 5: Spartan-6 FPGAs Automotive Devices Packages Affected

Device	Package-Pin	Device	Package-Pin
XA6SLX4	CS(G)225	XA6SLX25T	CS(G)324
XA6SLX9	CS(G)225		FG(G)484
	FT(G)256	XA6SLX45	CS(G)324
	CS(G)324		CS(G)484
XA6SLX16	CS(G)225	XA6SLX45T	FG(G)484
	FT(G)256		CS(G)324
	CS(G)324	FG(G)484	
XA6SLX25	FT(G)256	XA6SLX75	CS(G)484
	CS(G)324		FG(G)484
	FG(G)484	XA6SLX75T	FG(G)484
		XA6SLX100	FG(G)484

Key Dates and Ordering Information

Xilinx will begin to cutover products using copper wire in August 9th, 2016. Any changes on cutover date will be communicated through [XTP403](#).

Qualification Data

Qualification reports are available upon request.

Response

A response of acknowledgement with feedback within 30 days and approval between 3 to 6 months of this notice. For additional information or questions, please contact your local Xilinx Automotive or Sales representative.

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Additional Documentation

XTP403 - FAQ: Implications of XCN15005
<https://secure.xilinx.com/webreg/clickthrough.do?cid=393370>

Revision History

The following table shows the revision history for this document.

Date	Version	Revision
07/06/2015	1.0	Initial release.

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