

## Overview

The purpose of this notification is to communicate that Xilinx is transitioning to Pin gate mold (PGM) in TQG and VQG packages. Xilinx's Assembly Suppliers will begin their conversion by the end of 2013. This notification applies to all XC Commercial (C) grade, Industrial (I) grade and Automotive (XA) FPGA products.

## Description

Xilinx's Assembly Suppliers are converting from corner gate mold to pin gate mold for TQ(G)100, TQ(G)144 and VQ(G)100 packages. Suppliers are transitioning mature TQ(G) and VQ(G) devices to PGM for improved productivity. The PGM process is designed with JEDEC compliant package drawing and there is no change to Xilinx package dimensions.

In addition, a minor change is made in the marking template where the PGM ejector pin will move to the top-right corner of the package. The new marking template with PGM and CGM will be applied to all TQ(G)100 and VQ(G)100 device-packages, as shown in the [Figure 1](#) and [Figure 2](#).

These changes have no effect on form, fit, function or reliability.

## Products Affected

This change affects all standard and specification control document (SCD) XC Commercial (C) grade, Industrial (I) grade and Automotive (XA) devices listed in [Table 1](#) and [Table 2](#).

Table 1: Affected XC devices family using PGM

Device	Package	Device	Package
XC95144XL	TQ(G)100	XC2S100E *	TQ(G)144
XC9572XL	TQ(G)100	XC2S15	TQ(G)144
XC95144XL	TQ(G)144	XC2S30	TQ(G)144
XCR3128XL	TQ(G)144	XC2S50	TQ(G)144
XCR3256XL	TQ(G)144	XC2S50E *	TQ(G)144
XCR3384XL	TQ(G)144	XC2C128	VQ(G)100
XC2S100	TQ(G)144	XC2C64A	VQ(G)100

\* Devices are under [XCN12026](#) PDN.

Below examples are for XC new making templates of both PGM and CGM.



Figure 1: New marking template

Table 2: Affected XA devices family using PGM

Device	Package	Device	Package
XA2C128	VQG100	XA2C256	TQG144
XA2C256	VQG100	XA2C384	TQG144
XA2C64A	VQG100		

Below examples are for XA new making templates of both PGM & CGM.



Figure 2: New marking template

## Key Dates and Ordering Information

Xilinx will begin to cross ship both PGM and CGM packages with the new marking template by Jan 1<sup>st</sup>, 2014.

## Qualification Data

Supplier's have previously qualified PGM packages and have been in production since 2011. Xilinx will perform additional qualification using Xilinx device/packages listed in [Table 3](#). Xilinx qualification data will be available per the schedule in [Table 4](#).

**Table 3: Xilinx Reliability qualification vehicle**

Supplier	Package	Preconditioning (min of 192hrs at 30°C/60%RH and 3X reflow at 260°C Peak Temperature)	Temperature Cycle 'B' condition (T/C-B, min of 1000 cycles, -55°C to 125°C)	Unbiased Highly Accelerated Stress Test (UHAST, 96 hrs, 130°C/85%RH, 230kPa)	Temperature Humidity Bias (THB) 85°C, 85% R.H., VDD, min of 1000 hrs	High temperature storage (150°C, 1000 Hrs)
Amkor	XA2C384-TQG144	Yes, before T/C-B and UHAST/THB	77 *1 lot	77 *1 lot	0/77 *1 lot	45 x 1 lot
Amkor	XA2C256-VQG100	Yes, before T/C-B and UHAST/THB	77 *2 lots	77 *2 lots	0/77 *2 lots	25 x 2 lots
Amkor	XCR3384XL-TQG144	Yes, before T/C-B and UHAST/THB	25*3 lots (Max DPI)	None	None	None

**Table 4: Estimated Qualification Reliability Stress Test Schedule**

Package Type	Mold cavity type	Estimated Conditional Qualification Schedule	Estimated Production Release Schedule
Wire Bond TQ(G)100/144 & VQ(G) 100 Package	Pin Gate mold with UDLF	May 30 <sup>th</sup> , 2013	Jan 1 <sup>st</sup> , 2014

## 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>.

## Revision History

The following table shows the revision history for this document:

Date	Version	Description of Revisions
12/17/12	1.0	Initial release.

## Notice of Disclaimer

The information disclosed to you hereunder (the "Materials") is provided solely for the selection and use of Xilinx products. To the maximum extent permitted by applicable law: (1) Materials are made available "AS IS" and with all faults, Xilinx hereby DISCLAIMS ALL WARRANTIES AND CONDITIONS, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, OR FITNESS FOR ANY PARTICULAR PURPOSE; and (2) Xilinx shall not be liable (whether in contract or tort, including negligence, or under any other theory of liability) for any loss or damage of any kind or nature related to, arising under, or in connection with, the Materials (including your use of the Materials), including for any direct, indirect, special, incidental, or consequential loss or damage (including loss of data, profits, goodwill, or any type of loss or damage suffered as a result of any action brought by a third party) even if such damage or loss was reasonably foreseeable or Xilinx had been advised of the possibility of the same. Xilinx assumes no obligation to correct any errors contained in the Materials, or to advise you of any corrections or update. You may not reproduce, modify, distribute, or publicly display the Materials without prior written consent. Certain products are subject to the terms and conditions of the Limited Warranties which can be viewed at <http://www.xilinx.com/warranty.htm>; IP cores may be subject to warranty and support terms contained in a license issued to you by Xilinx. Xilinx products are not designed or intended to be fail-safe or for use in any application requiring fail-safe performance; you assume sole risk and liability for use of Xilinx products in Critical Applications: <http://www.xilinx.com/warranty.htm#critapps>.