



Important Product Information: Do Not Discard



CoolRunner™ XPLA3 CPLD Errata

DS012-E10 (v1.0) May 21, 2004

Errata Notification



These errata apply ONLY to CoolRunner™ XPLA3 CPLD devices. These errata DO NOT apply to any other CPLD.

Thank you for your interest in the enclosed CoolRunner™ XPLA3 CPLD devices. Although Xilinx has made every effort to ensure that these devices are of the highest possible quality, these devices are subject to the limitations described in the following errata. Please review these errata to ensure that the enclosed unit(s) meet(s) your application requirements.

Obtaining the Most-Recent Errata Version

By its very nature, an errata notification is a living document and is subject to updates based on recent findings. If this document is printed or saved locally in electronic form, please check for the most recent release, available to registered users via the Xilinx <http://support.xilinx.com> web site.

This document applies to revision 1.8 of the CoolRunner XPLA3 family data sheet.

Devices Affected by This Errata

These errata only apply to the CoolRunner XPLA3 CPLD (XCR3xxxXL) as shown in [Table 1](#) and [Table 2](#).

Table 1. XCR3xxxXL CPLD Devices Affected by these Errata

Device Types:	XCR3032XL XCR3128XL XCR3256XL XCR3384XL XCR3512XL
Packages:	All
Speed Grades:	All
Revisions:	Revisions A and B

Table 2. XCR3064XL CPLD Devices Affected by these Errata

Device Types:	XCR3064XL
Packages:	All
Speed Grades:	All
Revisions:	Revisions A, B, and C

How to Identify an Affected Device

These errata affect all CPLDs marked with an “XCRxxxXL” device type as shown in [Figure 1](#).

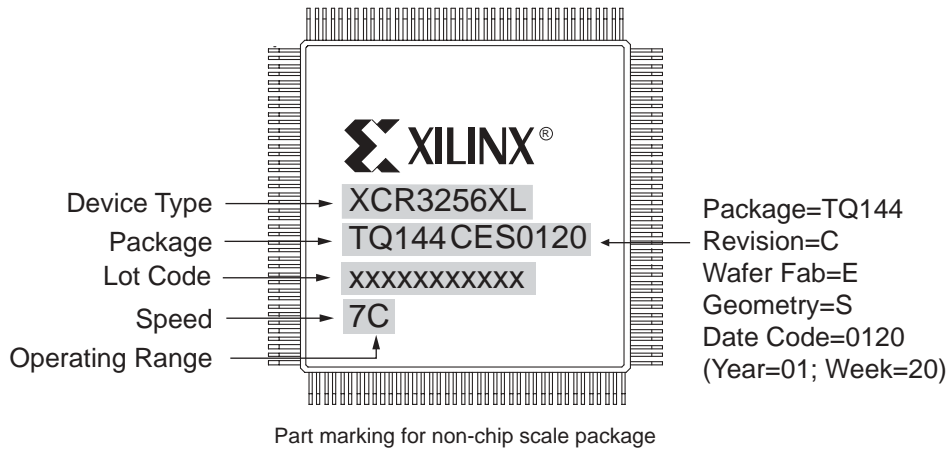


Figure 1. Example XCR3xxxXL Package Markings

Errata Summary

CoolRunner XPLA3 CPLDs have been found to exhibit an incorrect initialization under an obscure power condition. After a successful initialization from power up, V_{CCINT} needs to collapse (as if it has been intentionally turned off), but not all the way to ground, typically to only 0.6V. V_{CCINT} must then re-ramp to its final value without ever going all the way down to 0 Volts. Under this combination of events it is possible for the part to misconfigure its functionality. Fundamentally, residual charge within the part -- that is not bled off during the power down -- appears to cause an incorrect response to the low voltage on V_{CCINT} .

Recommendations

The following actions can be taken to eliminate the possibility of this device behavior:

- Proper power down to zero volts on V_{CCINT} will eliminate this behavior. Less than 0.25V will also work.
- Or, keep V_{CCINT} above 0.9V after initialization. Avoid letting the voltage drop into the 0.25 to 0.9V range.

Additional Questions or Clarifications

If additional questions or clarifications arise regarding these errata, please contact your local Xilinx field application engineer (FAE) or sales representative.

<http://www.xilinx.com/company/contact.htm>

Summary

Incorrect initialization can occur under obscure conditions. Two fixes are suggested above. The devices are being revised to correct for this behavior.

Revision History

Date	Version No.	Description
21-May-2004	1.0	Initial release.