Readback Issue on Spartan-3E Devices

XCN06015 (v2.0) October 23, 2006 Quality Alert

Overview

The purpose of this notice is to alert you that certain devices in the Spartan™-3E family do not support the Readback feature.

In this update (v2.0) of the alert, Xilinx has found an additional issue, which is described in detail below. The original Alert notified Xilinx customers that Readback was not supported on some Spartan-3E devices. In this updated Alert, Block RAM Readback is not supported on additional Spartan-3E devices.

Description

Spartan-3E devices support a function called Readback that allows users to read back the contents of the FPGA device to verify that the device configuration has completed successfully. On certain Spartan-3E devices (see Table 1), this function is not supported.

By default, the contents of the block RAM are masked out during the Readback process when using iMPACT. Block RAM Readback is not supported on some devices (see Table 1).

For additional information on the Readback feature, please see the “Spartan-3E FPGA Family: Complete Data Sheet” (DS312), found at:
http://www.xilinx.com/xlnx/xweb/xil_publications_display.jsp?category=Data+Sheets

From the above link, navigate to Spartan-3E -> Spartan-3E Complete Data Sheet (All four modules).

Products Affected

The Readback feature is not supported on all -4 speed grade, Commercial (-4C and -4CS1) devices for the XC3S1200E and XC3S1600E devices (see Table 1). The Readback feature is fully supported on all -4 speed grade, Industrial (-4I) devices, as well as all -5 speed grade, Commercial (-5C) devices. For a complete list of affected devices, see Table 1.

The Block RAM Readback feature is not supported on all -4 speed grade, Commercial (-4C and -4CS1) devices for the XC3S100E, XC3S250E and XC3S500E devices (see Table 1). The Block RAM Readback feature is fully supported on all -4 speed grade, Industrial (-4I) devices, as well as all -5 speed grade, Commercial (-5C) devices. For a complete list of affected devices, see Table 1.

Normal Readback, with the block RAM masked out, operates properly on all XC3S100E, XC3S250E, and XC3S500E devices.

Table 1: **Devices Affected**

Family Member	Readback Supported?	Block RAM Readback Supported?	Part Numbers
XC3S1200E **XC3S1600E** -4 speed grade, Commercial temperature	No	No	XC3S1200E-4FG320C/CS1,XC3S1200E-4FGG320C/CS1, XC3S1200E-4FG400C/CS1,XC3S1200E-4FGG400C/CS1, XC3S1200E-4FT256C/CS1, XC3S1200E-4FTG256C/CS1, XC3S1600E-4FG320C/CS1,XC3S1600E-4FGG320C/CS1, XC3S1600E-4FG400C/CS1,XC3S1600E-4FGG400C/CS1, XC3S1600E-4FG484C/CS1, XC3S1600E-4FGG484C/CS1
XC3S100E **XC3S250E** **XC3S500E** -4 speed grade, Commercial temperature	Yes	No	XC3S100E-4CP132C/CS1, XC3S100E-4CPG132C/CS1, XC3S100E-4TQ144C/CS1, XC3S100E-4TQG144C/CS1, XC3S100E-4VQ100C/CS1, XC3S100E-4VQG100C/CS1, XC3S250E-4CP132C/CS1, XC3S250E-4CPG132C/CS1, XC3S250E-4FT256C/CS1, XC3S250E-4FTG256C/CS1, XC3S250E-4PQ208C/CS1, XC3S250E-4PQG208C/CS1 XC3S250E-4TQ144C/CS1, XC3S250E-4TQG144C/CS1 XC3S250E-4VQ100C/CS1, XC3S250E-4VQG100C/CS1 XC3S500E-4CP132C/CS1, XC3S500E-4CPG132C/CS1 XC3S500E-4FG320C/CS1, XC3S500E-4FGG320C/CS1 XC3S500E-4FT256C/CS1, XC3S500E-4FTG256C/CS1 XC3S500E-4PQ208C/CS1, XC3S500E-4PQG208C/CS1

Traceability

This Quality Alert affects all date codes and lot codes of the devices listed in Table 1.

Recommendations

Customers who require Readback functionality for the XC3S1200E and XC3S1600E devices should purchase either the -5C (-5 speed grade, Commercial devices) or the -4I (-4 speed grade, Industrial devices), in place of the -4C (-4 speed grade, Commercial devices). Customers that do not require the Readback feature do not need to take any action in response to this Quality Alert.

Customers who require Block RAM Readback functionality for the XC3S100E, XC3S250E, or XC3S500E devices should purchase either the -5C (-5 speed grade, Commercial devices) or the -4I (-4 speed grade, Industrial devices), in place of the -4C (-4 speed grade, Commercial devices). Customers that do not require the Block RAM Readback feature do not need to take any action in response to this Quality Alert. Please note that Readback is functional on these devices when the Block RAM is masked out.

For additional information, or if you have any questions, contact Xilinx Technical Support.

Revision History

The following table shows the revision history for this document.

Date	Version	Revision
5/31/06	1.0	Initial Xilinx release.
6/01/06	1.0.1	Changed date to May 29, 2006 to reflect actual release date.
10/23/06	2.0	Added Block RAM Readback issue for the XC3S100E, XC3S250E, and XC3S500E. Updated all sections (except Traceability) and Table 1 reflecting this change.