



# Increase in Shift Register Delay for Virtex-4 FX Devices (-11 and -12 Speed Grades)

XCN06023 (v1.0) December 11, 2006

For Your Information - FYI

## Overview

The purpose of this notice is to communicate an increase of Shift Register delay for Virtex™-4 FX devices. This change applies to all Virtex-4 FX devices in -11 and -12 speed grades, except for FX12, and only affects designs that use the Shift Register.

## Description

Based on additional characterization data, Xilinx has adjusted the Shift Register delay for FX20, FX60, FX100, FX140, and FX40 devices as listed in [Table 1](#). The Shift Register delay is unchanged for -10 speed grades. The Virtex-4 datasheet has been updated with the new specification.

The change will be in speed specification v1.62 (included in ISE 9.1i). To obtain v1.62 speed specification for ISE 8.2i (and earlier), please contact Xilinx Technical Support: <http://www.xilinx.com/support/techsup/tappinfo.htm>.

Table 1: Max Shift Register Delay (ns)

Parameter	Speeds Specification	-12	-11	-10
TREGXB	V1.61 (old)	1.64	1.74	2.04
	<b>V1.62 (new)</b>	<b>1.70</b>	<b>1.80</b>	<b>2.04</b>
TREGYB	V1.61 (old)	1.74	1.85	2.17
	<b>V1.62 (new)</b>	<b>1.81</b>	<b>1.92</b>	<b>2.17</b>
TCKSH	V1.61 (old)	1.60	1.70	1.99
	<b>V1.62 (new)</b>	<b>1.67</b>	<b>1.76</b>	<b>1.99</b>

## Products Affected

This change affects the following devices that have been in production before the time of the datasheet change, which includes the following devices:

XC4VFX100-11FF1152I4012

XC4VFX60-11FF672I4020

## Recommendations

If your design is not using Shift Register, no action is required.

If your design is using Shift Register, you should re-time your design using software version ISE 8.1i SP2 (or later), using speed specification v1.62 (or later).

## Response

No response is required to this PCN. For additional information or questions, please contact [Xilinx Technical Support](#).

**Important Notice:** Xilinx Customer Notifications (PCN, PDN, and Quality Alerts) can be delivered via e-mail alerts sent by the MySupport Web site (<http://www.xilinx.com/support/mysupport.htm>). Register today and personalize your “MyAlerts” to include Customer Notifications. This change 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, and so forth. For instructions on how to sign up, refer to [Xilinx Answer Record 18683](#).

---

---

## Revision History

The following table shows the revision history for this document.

Date	Version	Revision
12/11/06	1.0	Initial release.