



Change in Wafer Fabrication Facility for XC95288XL and XC9536XL CPLDs

XCN05015 (v1.0) October 3, 2005

Product/Process Change Notice

Overview

The purpose of this notification is to communicate a change in the wafer fabrication facility for the XC95288XL and XC9536XL CPLD devices.

Description

The XC95288XL and XC9536XL CPLD devices will transition from a 0.35µm four-layer metal Flash CMOS process at UMC, Taiwan, to a 0.35µm four-layer metal Flash CMOS process at He Jian Technology Company, China. This will complete the transition of the XC9500XL CPLD family, as the XC95144XL and XC9572XL are already in volume production at He Jian. See [XCN05003](#), released in January 2005, for more information regarding the XC95144XL and XC9572XL product transitions.

This change improves the ability of Xilinx to support this product effectively, competitively, and to accommodate our customers' high-volume demands. There is no difference in fit, form, or function between the latest revisions of these devices currently fabricated by UMC and those fabricated by He Jian.

This notification is for a change in the wafer fabrication facility only. There are no changes to the assembly or test locations for the devices covered by this notification.

Upon availability of production units from He Jian of XC95288XL and XC9536XL on January 2, 2006, customers can expect to receive devices fabricated by either UMC or He Jian until the UMC material is depleted.

Products Affected

This change affects all speed, package, and temperature variations of the commercial and industrial grade XC95288XL and XC9536XL devices. Q grade devices are not affected by this PCN. Affected part numbers are included in the following lists:

XC95288XL-10BG256C	XC95288XL-10BG256I	XC95288XL-6BG256C	XC95288XL-7BG256C	XC95288XL-7BG256I
XC95288XL-10CS280C	XC95288XL-10CS280I	XC95288XL-6CS280C	XC95288XL-7CS280C	XC95288XL-7CS280I
XC95288XL-10FG256C	XC95288XL-10FG256I	XC95288XL-6FG256C	XC95288XL-7FG256C	XC95288XL-7FG256I
XC95288XL-10PQ208C	XC95288XL-10PQ208I	XC95288XL-6PQ208C	XC95288XL-7PQ208C	XC95288XL-7PQ208I
XC95288XL-10TQ144C	XC95288XL-10TQ144I	XC95288XL-6TQ144C	XC95288XL-7TQ144C	XC95288XL-7TQ144I
XC95288XL-10BGG256C	XC95288XL-10BGG256I	XC95288XL-6BGG256C	XC95288XL-7BGG256C	XC95288XL-7BGG256I
XC95288XL-10CSG280C	XC95288XL-10CSG280I	XC95288XL-6CSG280C	XC95288XL-7CSG280C	XC95288XL-7CSG280I
XC95288XL-10FGG256C	XC95288XL-10FGG256I	XC95288XL-6FGG256C	XC95288XL-7FGG256C	XC95288XL-7FGG256I
XC95288XL-10PQG208C	XC95288XL-10PQG208I	XC95288XL-6PQG208C	XC95288XL-7PQG208C	XC95288XL-7PQG208I
XC95288XL-10TQG144C	XC95288XL-10TQG144I	XC95288XL-6TQG144C	XC95288XL-7TQG144C	XC95288XL-7TQG144I

XC9536XL-10CS48C	XC9536XL-10CS48I	XC9536XL-5CS48C	XC9536XL-7CS48C	XC9536XL-7CS48I
XC9536XL-10PC44C	XC9536XL-10PC44I	XC9536XL-5PC44C	XC9536XL-7PC44C	XC9536XL-7PC44I
XC9536XL-10VQ44C	XC9536XL-10VQ44I	XC9536XL-5VQ44C	XC9536XL-7VQ44C	XC9536XL-7VQ44I
XC9536XL-10VQ64C	XC9536XL-10VQ64I	XC9536XL-5VQ64C	XC9536XL-7VQ64C	XC9536XL-7VQ64I
XC9536XL-10CSG48C	XC9536XL-10CSG48I	XC9536XL-5CSG48C	XC9536XL-7CSG48C	XC9536XL-7CSG48I
XC9536XL-10PCG44C	XC9536XL-10PCG44I	XC9536XL-5PCG44C	XC9536XL-7PCG44C	XC9536XL-7PCG44I
XC9536XL-10VQG44C	XC9536XL-10VQG44I	XC9536XL-5VQG44C	XC9536XL-7VQG44C	XC9536XL-7VQG44I
XC9536XL-10VQG64C	XC9536XL-10VQG64I	XC9536XL-5VQG64C	XC9536XL-7VQG64C	XC9536XL-7VQG64I

Traceability

These devices can be distinguished by the second letter in the three-letter code located in the middle of the second line of the package topmark. The second letter is “W” for product fabricated at He Jian, and “M” for product fabricated at UMC. Please refer to the diagram below.

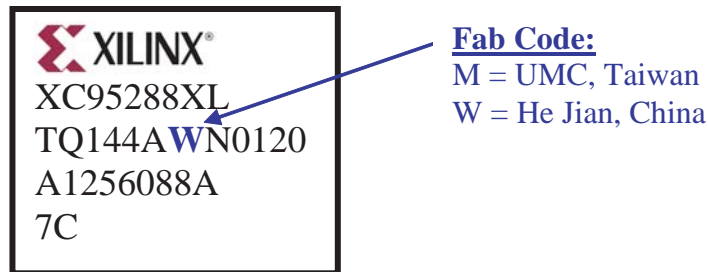


Figure 1: Package Topmark Showing Fab Codes

Key Dates and Ordering

Table 1: Key Dates for XC95288XL and XC9536XL Devices

Event	Date
He Jian Sample Availability	October 3, 2005
He Jian Production Switch	January 2, 2006
UMC LTB	June 26, 2006
UMC LTS	December 29, 2006

Qualification samples of XC95288XL and XC9536XL devices fabricated at He Jian are available now. When placing orders for sample units, use special ordering code 0962 by appending “0962” to the end of the standard ordering part number (for example, XC95288XL-10TQ144C0962). The ordering code 0962 will not be marked on the package topmark.

Upon availability of production units from He Jian of the XC95288XL and the XC9536XL devices on January 2, 2006, customers can expect to receive devices fabricated by either UMC or He Jian until the UMC material is depleted. The last time buy (LTB) date for product specifically fabricated at UMC in Taiwan is June 26, 2006, with shipment requested before December 29, 2006 (Last Time Ship - LTS). Please contact your [Xilinx Sales Representative](#) to obtain qualification samples or production devices.

Qualification Data

Table 2: Product Reliability Data

Test	Test conditions	Device	Package	Results
ESD	HBM JESD22-A-114	XC95288XL	PQ208	6/6 passed 2000 V
		XC9536XL	PC44	6/6 passed 2000 V
Latch up	JESD78	XC95288XL	PQ208	6/6 passed 200 mA @125°C
		XC9536XL	PC44	6/6 passed 200 mA @125°C

Table 3: Process Reliability Data: 0.35mm He Jian Process Reliability Data (Wafer Level Reliability Data)

Mechanism	Sample Size	Stress Condition	Condition of Quoted Results	Type	Product Life Time (Years)
HCI	3 lots, 20 units/lot	25°C, 1.1Vcc	-55°C	NMOS/LV	2.71E+04
				PMOS/LV	6.08E+07
				NMOS/HV	8.74E+05
				PMOS/HV	1.50E+08
TDDB	3 lots, 20 units/lot	3 voltages / 3 temperatures, 120°C to 160°C	80°C	N-WELL (HV)	6.79E+04
				P-WELL (HV)	2.76E+05
				N-WELL (LV)	1.56E+10
				P-WELL (LV)	1.32E+05
EM	3 lots, 20 units/lot	210°C to 250°C	125°C	M1	2.20E+03
				M2	1.84E+02
				TM	2.07E+03
				Contact	4.00E+01
				V1	2.83E+02
				TV	1.84E+02

Recommendation

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

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Revision History

The following table shows the revision history for this document.

Date	Version	Revision
10/03/05	1.0	Initial release.