



Discontinuation of the XC2C32 and XC2C64 CPLDs

XCN05017 (v1.1) April 24, 2006

Product/Process Discontinuation Notice

Overview

The purpose of this notice is to communicate the discontinuation of the XC2C32 and XC2C64 CPLD devices. These CPLD devices are being replaced by enhanced devices in the CoolRunner™-II CPLD family.

Description

Xilinx has released enhanced versions of the XC2C32 and XC2C64 members of the CoolRunner-II CPLD family, the XC2C32A and XC2C64A, respectively. The enhanced versions are pin-for-pin replacements; a cross-reference by part number is provided in [Table 2](#) and [Table 3](#).

The enhanced "A" devices offer an additional I/O bank, enabling level translation ability to these two devices. In addition, the output drive performance for the XC2C64A has been improved, resulting in faster output transitions for LVCMOS25 and LVCMOS33 as compared to the original XC2C64. [Table 1](#) gives detailed performance comparisons.

Table 1: Output Transitions Performance Comparison

| Speed Grade | -5 | | -7 | |
|-------------|--------|---------|--------|---------|
| Part | XC2C64 | XC2C64A | XC2C64 | XC2C64A |
| Tout25 (nS) | 4.8 | 0.8 | 6 | 0.9 |
| Tout33 (nS) | 7 | 1.2 | 10 | 1.4 |

Products Affected

This change affects all speed, package, and temperature variations of the commercial and industrial grade XC2C32 and XC2C64 devices. Affected part numbers and the pin-for-pin replacement part numbers are shown in [Table 2](#) for XC2C32 devices and in [Table 3](#) for XC2C64 devices:

Table 2: Replacements for XC2C32 Parts

| Discontinued Part Number | Replacement Part Number |
|--------------------------|-------------------------|
| XC2C32-3CP56C | XC2C32A-4CP56C |
| XC2C32-3CPG56C | XC2C32A-4CPG56C |
| XC2C32-3PC44C | XC2C32A-4PC44C |
| XC2C32-3VQ44C | XC2C32A-4VQ44C |
| XC2C32-4CP56C | XC2C32A-4CP56C |
| XC2C32-4PC44C | XC2C32A-4PC44C |
| XC2C32-4VQ44C | XC2C32A-4VQ44C |
| XC2C32-4VQG44C | XC2C32A-4VQG44C |
| XC2C32-6CP56C | XC2C32A-6CP56C |

Table 2: Replacements for XC2C32 Parts (Continued)

| | |
|----------------|-----------------|
| XC2C32-6CP56I | XC2C32A-6CP56I |
| XC2C32-6CPG56I | XC2C32A-6CPG56I |
| XC2C32-6PC44C | XC2C32A-6PC44C |
| XC2C32-6PC44I | XC2C32A-6PC44I |
| XC2C32-6VQ44C | XC2C32A-6VQ44C |
| XC2C32-6VQG44C | XC2C32A-6VQG44C |
| XC2C32-6VQ44I | XC2C32A-6VQ44I |

Table 3: Replacements for XC2C64 Parts

| Discontinued Part Number | Replacement Part Number |
|--------------------------|-------------------------|
| XC2C64-5CP56C | XC2C64A-5CP56C |
| XC2C64-5PC44C | XC2C64A-5PC44C |
| XC2C64-5VQ100C | XC2C64A-5VQ100C |
| XC2C64-5VQ44C | XC2C64A-5VQ44C |
| XC2C64-5VQG44C | XC2C64A-5VQG44C |
| XC2C64-7CP56C | XC2C64A-7CP56C |
| XC2C64-7CPG56C | XC2C64A-7CPG56C |
| XC2C64-7CP56I | XC2C64A-7CP56I |
| XC2C64-7CPG56I | XC2C64A-7CPG56I |
| XC2C64-7PC44C | XC2C64A-7PC44C |
| XC2C64-7PC44I | XC2C64A-7PC44I |
| XC2C64-7VQ100C | XC2C64A-7VQ100C |
| XC2C64-7VQG100C | XC2C64A-7VQG100C |
| XC2C64-7VQ100I | XC2C64A-7VQ100I |
| XC2C64-7VQ44C | XC2C64A-7VQ44C |
| XC2C64-7VQG44C | XC2C64A-7VQG44C |
| XC2C64-7VQ44I | XC2C64A-7VQ44I |
| XC2C64-7VQG44I | XC2C64A-7VQG44I |

Design and Programming Software

XC2C32 and XC2C64 JEDEC files will correctly program the replacement devices listed in Table 3. Please note that the reverse is not true; a JEDEC file compiled from a design file for the XC2C32A or the XC2C64A will not program a non-A device, as the non-A devices do not support multiple I/O banks.

If you wish to program an “A” device with “non-A” JEDEC file and you are using the Xilinx iMPACT tool to program the devices, you must update to 7.1i Service Pack 4 or newer. In addition, an updated BSDL file is required for each device (xc2c32.bsd dated 10/6/2005 or newer allows programming an XC2C32A with an XC2C32 JEDEC file and xc2c64.bsd dated 10/6/2005 or newer allows programming an XC2C64A with an XC2C64 JEDEC file). These files can be downloaded from the web at: http://www.xilinx.com/xlnx/xil_sw_updates_home.jsp. If you are using a third-party programmer, no action is necessary to program an “A” device with a “non-A” JEDEC file.

Device ID Codes

Table 4 gives the full device ID codes for the discontinued and replacement devices. Revision and package bits have been marked with As as they are not necessary to differentiate the CoolRunner-II from the CoolRunner-IIA devices.

Table 4: Device ID Codes

| Part | Device ID Code |
|---------|----------------------------------|
| XC2C32 | XXXX0110110000011XXX000010010011 |
| XC2C32A | XXXX0110111000011XXX000010010011 |
| XC2C64 | XXXX0110110001011XXX000010010011 |
| XC2C64A | XXXX0110111001011XXX000010010011 |

Key Dates

Final orders are accepted on or before April 24, 2006. All last time buys (final orders) are non-cancelable and non-returnable.

Final deliveries must occur on or before October 24, 2006.

Traceability

Figure 1 illustrates where the discontinued and suggested replacement part numbers can be found.

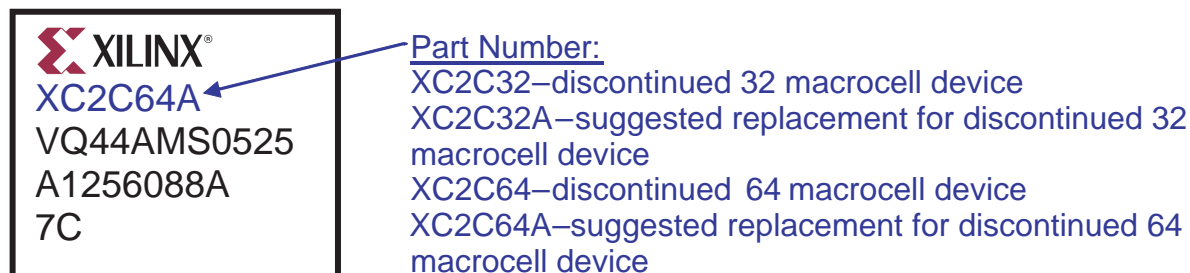


Figure 1: Part Marking Example

Response

No response is required. 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 |
|----------|---------|--|
| 10/31/05 | 1.0 | Initial Xilinx release. |
| 04/24/06 | 1.1 | Updated Key Dates section for clarity. |