kontron

» VX3830 «

Hardware Release Notes

CA.DT.B00-1e - December 2012

Revision History

Publication Title:	VX3830 Hardware Release Notes	
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Rev.	Brief Description of Changes	Date of Issue
1e	New E.C. Level 10101	12-2012
0e	Initial Issue	01-2012

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Environmental Protection Statement

This product has been manufactured to satisfy environmental protection requirements where possible. Many of the components used (structural parts, printed circuit boards, connectors, batteries, etc.) are capable of being recycled.

Final disposition of this product after its service life must be accomplished in accordance with applicable country, state, or local laws or regulations.

Environmental protection is a high priority with Kontron.

Kontron follows the DEEE/WEEE directive.

You are encouraged to return our products for proper disposal.

The Waste Electrical and Electronic Equipment (WEEE) Directive aims to:

- reduce waste arising from electrical and electronic equipment (EEE)
- make producers of EEE responsible for the environmental impact of their products, especially when they become waste
- encourage separate collection and subsequent treatment, reuse, recovery, recycling and sound environmental disposal of EEE
- improve the environmental performance of all those involved during the lifecycle of EEE

Conventions

This guide uses several types of notice: Note, Caution, ESD.

Note: this notice calls attention to important features or instructions.


Caution: this notice alert you to system damage, loss of data, or risk of personal injury.


ESD: This banner indicates an Electrostatic Sensitive Device.

All numbers are expressed in decimal, except addresses and memory or register data, which are expressed in hexadecimal. The prefix `0x' shows a hexadecimal number, following the `C' programming language convention.

The multipliers `k', `M' and `G' have their conventional scientific and engineering meanings of $*10^3$, $*10^6$ and $*10^9$ respectively. The only exception to this is in the description of the size of memory areas, when `K', `M' and `G' mean $*2^{10}$, $*2^{20}$ and $*2^{30}$ respectively.

When describing transfer rates, `k' `M' and `G' mean $*10^3$, $*10^6$ and $*10^9$ *not $*2^{10}$ $*2^{20}$ and $*2^{30}$.*

In PowerPC terminology, multiple bit fields are numbered from 0 to n, where 0 is the MSB and n is the LSB. PCI and CompactPCI terminology follows the more familiar convention that bit 0 is the LSB and n is the MSB.

Signal names ending with an asterisk (*) or a hash (#) denote active low signals; all other signals are active high.

Signal names follow the PICMG 2.0 R3.0 CompactPCI Specification and the PCI Local Bus 2.3 Specification.

For Your Safety

Your new Kontron product was developed and tested carefully to provide all features necessary to ensure its compliance with electrical safety requirements. It was also designed for a long fault-free life. However, the life expectancy of your product can be drastically reduced by improper treatment during unpacking and installation. Therefore, in the interest of your own safety and of the correct operation of your new Kontron product, you are requested to conform with the following guidelines.

High Voltage Safety Instructions


Warning!
All operations on this device must be carried out by sufficiently skilled personnel only.


Caution, Electric Shock!
Before installing a not hot-swappable Kontron product into a system always ensure that your mains power is switched off. This applies also to the installation of piggybacks. Serious electrical shock hazards can exist during all installation, repair and maintenance operations with this product. Therefore, always unplug the power cable and any other cables which provide external voltages before performing work.

Special Handling and Unpacking Instructions

ESD Sensitive Device!
Electronic boards and their components are sensitive to static electricity. Therefore, care must be taken during all handling operations and inspections of this product, in order to ensure product integrity at all times

Do not handle this product out of its protective enclosure while it is not used for operational purposes unless it is otherwise protected.

Whenever possible, unpack or pack this product only at EOS/ESD safe work stations. Where a safe work station is not guaranteed, it is important for the user to be electrically discharged before touching the product with his/her hands or tools. This is most easily done by touching a metal part of your system housing.

It is particularly important to observe standard anti-static precautions when changing piggybacks, ROM devices, jumper settings etc. If the product contains batteries for RTC or memory backup, ensure that the board is not placed on conductive surfaces, including anti-static plastics or sponges. They can cause short circuits and damage the batteries or conductive circuits on the board.

General Instructions on Usage

In order to maintain Kontron's product warranty, this product must not be altered or modified in any way. Changes or modifications to the device, which are not explicitly approved by Kontron and described in this manual or received from Kontron's Technical Support as a special handling instruction, will void your warranty.

This device should only be installed in or connected to systems that fulfill all necessary technical and specific environmental requirements. This applies also to the operational temperature range of the specific board version, which must not be exceeded. If batteries are present, their temperature restrictions must be taken into account.

In performing all necessary installation and application operations, please follow only the instructions supplied by the present manual.

Keep all the original packaging material for future storage or warranty shipments. If it is necessary to store or ship the board, please re-pack it as nearly as possible in the manner in which it was delivered.

Special care is necessary when handling or unpacking the product. Please consult the special handling and unpacking instruction on the previous page of this manual.

Table Of Contents

List Of Figures

Chapter 1 - Introduction

This document describes the engineering evolution of the referenced products.

Functional changes that differ from previous version of the document are identified by a vertical bar in the margin.

You will find in the following pages:

This document applies to all available VX3830 Environment Classes:

- Standard Air: SA
- Rugged Conduction-Cooled: RC

If a specific information applies only to a specific environment class, it is clearly specified in the information description. For example, the reference VX3830/RC applies only to VX3830 Rugged Conduction-Cooled environment class.

This document refers to the up-to-date release of the following hardware documentation:

- VX3830 User's Guide CA.DT.A80

Chapter 2 - Board Identification

The VX3830 boards are identified by labels fitted on the top and bottom sides.

Top Side

A "Order Code" label.

B "Serial Number" label.

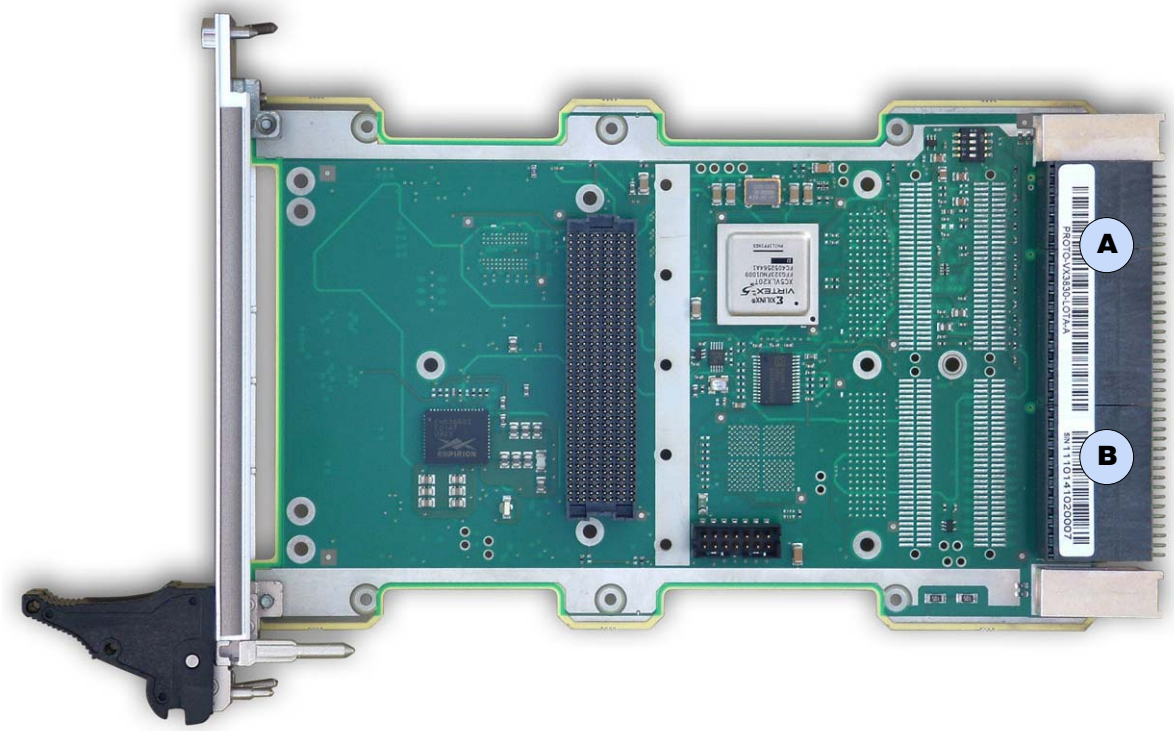

Figure 1: VX3830 Identification (Top Side)

Bottom Side

C "Functional Identification" label (Variant + E.C. Level)

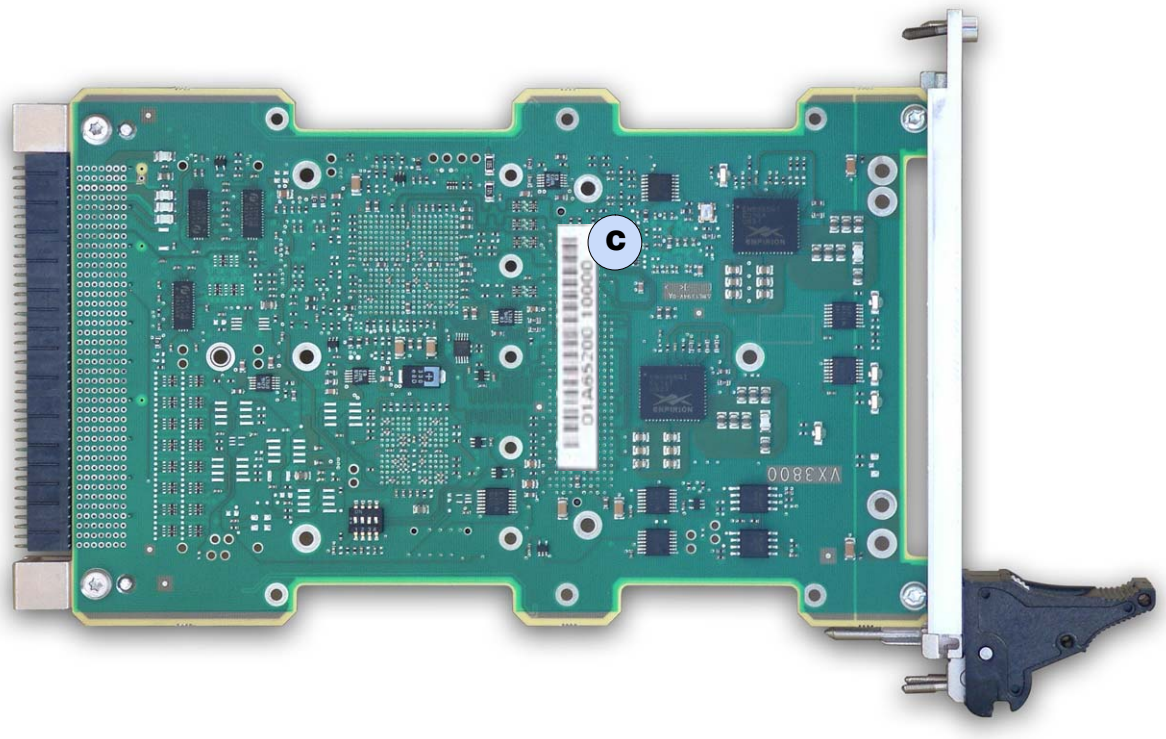

Figure 2: VX3830 Identification (Bottom Side)

Chapter 3 - General Information

Power Supplies

At Power ON, a monotonic rise time under 25 ms is required on each power supply: 3V3 and 5V.

For a power off condition to be valid, the +5V and the +3.3V power supplies should remain at 0V for at least one second.

Chapter 4 - Board Identification

4.1 How to Use the Board Revision Guide Table

1. Find the E.C. Level associated to your board as described in the Chapter 2 “Board Identification" page 2.
2. Find the column associated to this E.C. Level in associated table.
3. Check for a specific item in the table lines:
   - 3.1. A “x" (cross) in the E.C. Level column indicates that this item applies to this E.C. Level.
   - 3.2. No “x" (cross) in the E.C. Level column indicates that this item does not apply to this E.C. Level.
   - 3.3. If the functionality described by the item is not available on your board do not take into account this item. To know the functionalities available or not on your board, read the User's Guide associated with your board version.

Each item is fully described in section 4.3 “Item Detailed Description" page 6.

4.2 Revision Guide Table

Item	Description	E.C. Level			
		10001	10100	10101	
1	NO FPGA CODE AVAILABLE	X			
2	No access to the VPX_GPIO signals		X		
3	No memory DDR2 on the VX3830 board		X		
4	DDR2 Device not functional	X			

4.3 Item Detailed Description

Each item applies only to a specific group of E.C. Levels.
Refer to the table available in section 4.2 “Revision Guide” page 5 to find the specific E.C. Levels associated to a specific item.

Item # 1 No FPGA Code Available

Description : In the E.C. Level 10001, no FPGA code is available for the customer.

Workaround : Fixed in E.C. Level 10100 and 10101. Two identical images are programmed in the SPI memory flash of the board. At power on the FPGA will be loaded with the “VITA 57” function.

Item # 2 No Access to the VPX_GPIO signals

Description : In the E.C. Level 10100 and 10101, the GPIOs defined on the VPX connectors are not accessible. Contact Kontron to have an access to these GPIOs.

Workaround : None

Item # 3 No Memory DDR2 on the VX3830 Board

Description : In the E.C. Level 10100, DDR2 device is not present.

Workaround : None

Item # 4 DDR2 Not Functional

Description : In the E.C. Level 10001, DDR2 device is present but not functional.

Workaround : Fixed in E.C. Level 10101

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