



Mentor® Verification IP Altera® Edition

Release Notes

Software Version 10.2b

August 2013

© 2012-2013 Mentor Graphics Corporation
All rights reserved.

This document contains information that is proprietary to Mentor Graphics Corporation. The original recipient of this document may duplicate this document in whole or in part for internal business purposes only, provided that this entire notice appears in all copies. In duplicating any part of this document, the recipient agrees to make every reasonable effort to prevent the unauthorized use and distribution of the proprietary information.

This document is for information and instruction purposes. Mentor Graphics reserves the right to make changes in specifications and other information contained in this publication without prior notice, and the reader should, in all cases, consult Mentor Graphics to determine whether any changes have been made.

The terms and conditions governing the sale and licensing of Mentor Graphics products are set forth in written agreements between Mentor Graphics and its customers. No representation or other affirmation of fact contained in this publication shall be deemed to be a warranty or give rise to any liability of Mentor Graphics whatsoever.

MENTOR GRAPHICS MAKES NO WARRANTY OF ANY KIND WITH REGARD TO THIS MATERIAL INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

MENTOR GRAPHICS SHALL NOT BE LIABLE FOR ANY INCIDENTAL, INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES WHATSOEVER (INCLUDING BUT NOT LIMITED TO LOST PROFITS) ARISING OUT OF OR RELATED TO THIS PUBLICATION OR THE INFORMATION CONTAINED IN IT, EVEN IF MENTOR GRAPHICS CORPORATION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

RESTRICTED RIGHTS LEGEND 03/97

U.S. Government Restricted Rights. The SOFTWARE and documentation have been developed entirely at private expense and are commercial computer software provided with restricted rights. Use, duplication or disclosure by the U.S. Government or a U.S. Government subcontractor is subject to the restrictions set forth in the license agreement provided with the software pursuant to DFARS 227.7202-3(a) or as set forth in subparagraph (c)(1) and (2) of the Commercial Computer Software - Restricted Rights clause at FAR 52.227-19, as applicable.

Contractor/manufacturer is:

Mentor Graphics Corporation

8005 S.W. Boeckman Road, Wilsonville, Oregon 97070-7777.

Telephone: 503.685.7000

Toll-Free Telephone: 800.592.2210

Website: www.mentor.com

SupportNet: supportnet.mentor.com/

Send Feedback on Documentation: supportnet.mentor.com/doc_feedback_form

TRADEMARKS: The trademarks, logos and service marks ("Marks") used herein are the property of Mentor Graphics Corporation or other third parties. No one is permitted to use these Marks without the prior written consent of Mentor Graphics or the respective third-party owner. The use herein of a third-party Mark is not an attempt to indicate Mentor Graphics as a source of a product, but is intended to indicate a product from, or associated with, a particular third party. A current list of Mentor Graphics' trademarks may be viewed at: www.mentor.com/trademarks.

End-User License Agreement: You can print a copy of the End-User License Agreement from: www.mentor.com/eula.

Introduction

The Mentor® Verification IP Altera® Edition provides Bus Functional Models (BFMs) that simulate the behavior and facilitate the verification of design IP. This release includes support for the ARM AMBA® AXI3™ and AXI4™ bus interfaces. These BFMs conform to the *AMBA® AXI™ and ACE™ Protocol Specification, AXI3™, AXI4™, and AXI4-Lite™, ACE, and ACE-Lite™* (ARM IHI 0022D) with restrictions to AMBA AXI3 and AXI4 functionality, described in the section “Protocol Restrictions” in the *Mentor Verification IP Altera Edition AXI3/AXI4 User Guide*.

Note

This release supports only the AMBA AXI3 and AXI4 protocols; AMBA AXI4-Lite, ACE, and ACE-lite protocols are not supported.

Release v10.2b includes the following features:

- AMBA AXI3 master, monitor, and slave bus functional models (BFMs).
- AMBA AXI4 master, monitor, and slave bus functional models (BFMs).
- Protocol checks that monitor and report any protocol violations.
- Support for both SystemVerilog (Verilog) and VHDL testbenches.
- Ready-to-use AXI3 and AXI4 master, monitor, and slave components for the Qsys integration tool included with the Altera Quartus II software.
- Support for the Altera Quartus II software, version 13.1.
- Support for the following functional simulation tools:
 - Mentor Graphics ModelSim/Questa Sim 10.2b
 - Synopsys VCS/VCSMX 2013.06
 - Cadence IES 12.20.014
- Examples showing how to connect and use the BFMs including
 - Qsys system with master, monitor, and slave BFMs connected back to back.
 - SystemVerilog and VHDL master, monitor, and slave test programs.
- User Guide with tutorials.

These release notes summarize the [Changes and Enhancements](#) in this release, [Authorization Codes](#) required, and [Support Information](#).

Changes and Enhancements

The following assertions were fixed:

- AXI3 – BFM for an incorrect firing of assertion
AXI_WRITE_STROBE_ON_INVALID_BYTE_LANES on crossing address boundary.
- AXI4 – BFM for an incorrect firing of assertion
AXI4_INVALID_WRITE_STROBES_ON_ALIGNED_WRITE_TRANSFER on crossing address boundary.

Authorization Codes

The following authorization codes are required for this release:

- mgcvipae, required to use Mentor Verification IP Altera Edition
- mgcvipaeaxi, required to use AXI3 functionality
- mgcvipaeaxi4, required to use AXI4 functionality

Mentor Verification IP (VIP) Altera Edition is a separately licensed product that is not part of the Modelsim-Altera simulator. Licenses need to be requested from Altera, or your local distributor similar to licenses for the Modelsim-Altera subscription edition.

Support Information

Mentor Verification IP Altera Edition is supported by Altera Corporation Altera World-Wide-Web Support: <http://www.altera.com/mySupport>.