



# Microsemi IGLOO2 HPMS Single Error Correct / Double Error Detect User Guide

[Home](#) » [Microsemi](#) » Microsemi IGLOO2 HPMS Single Error Correct / Double Error Detect User Guide 

## Contents

- [1 Microsemi IGLOO2 HPMS Single Error Correct / Double Error Detect](#)
- [2 Introduction](#)
- [3 Configuration Options](#)
- [4 Port Description](#)
- [5 Product Support](#)
- [6 Documents / Resources](#)
  - [6.1 References](#)
- [7 Related Posts](#)



## Microsemi IGLOO2 HPMS Single Error Correct / Double Error Detect



## Introduction

The IGLOO2 HPMS has an embedded DDR controller (HPMS DDR). This DDR controller is intended to control an

off-chip DDR memory. The HPMS DDR controller can be accessed from the HPMS (using HPDMA) as well as from the FPGA fabric.

When you use System Builder to build a system block which includes an HPMS DDR, System Builder configures the HPMS DDR controller for you based on your entries and selections.

No separate HPMS DDR configuration by the user is required. For details, please refer to the IGLOO2 System Builder User 's Guide.

System Builder

## Configuration Options

You can configure your EDAC options from the System Builder SECDED page, as shown in Figure 1-1.

Figure 1-1 • Configure EDAC

The screenshot shows a 'Configuration' window with several sections. The 'EDAC Errors' section has a checkbox for 'Expose EDAC\_ERROR bus'. The 'eSRAM\_0' and 'eSRAM\_1' sections each have an 'Enable EDAC' checkbox and an 'Enable EDAC Interrupt(s)' dropdown menu set to 'None'. The 'MDDR' section has a checked checkbox for 'Enable MDDR ECC Interrupt'.

**Expose EDAC\_ERROR Bus** – Use this option to expose the EDAC\_ERROR bus signal to the FPGA fabric where it can be used by your design.

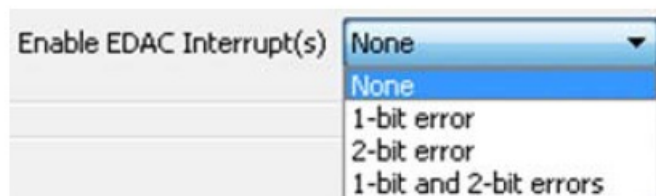
**Enable EDAC** – Use this option to enable the EDAC functionality for each of the following blocks:

- eSRAM\_0
- eSRAM\_1
- MDDR

For the eSRAMs, the EDAC Interrupt can be configured in one of four ways (as shown in Figure 1-2):

- None (for no Interrupts)
- 1-bit Error (Interrupts when there is a 1-bit error)
- 2-bit Error (Interrupts when there is a 2-bit error)
- 1-bit and 2-bit Error (Interrupts when BOTH 1-bit error AND 2-bit error occur)

Figure 1-2 • Enable EDAC Interrupts



## Port Description

Table 2-1 • Port Description

Port Name	Direction	PAD?	Description
EDAC_BUS[0]	Out	No	(ESRAM0_EDAC_1E & ESRAM0_EDAC_1E_EN)    (ESRAM0_EDAC_2E & ESRAM0_EDAC_2E_EN)
EDAC_BUS[1]	Out	No	(ESRAM1_EDAC_1E & ESRAM1_EDAC_1E_EN)    (ESRAM1_EDAC_2E & ESRAM1_EDAC_2E_EN)
EDAC_BUS[7]	Out	No	MDDR_ECC_INT & MDDR_ECC_INT_EN

## Product Support

Microsemi SoC Products Group backs its products with various support services, including Customer Service, Customer Technical Support Center, a website, electronic mail, and worldwide sales offices. This appendix contains information about contacting Microsemi SoC Products Group and using these support services.

### Customer Service

Contact Customer Service for non-technical product support, such as product pricing, product upgrades, update information, order status, and authorization.

From North America, call 800.262.1060

From the rest of the world, call 650.318.4460 Fax, from anywhere in the world, 408.643.6913

### Customer Technical Support Center

Microsemi SoC Products Group staffs its Customer Technical Support Center with highly skilled engineers who can help answer your hardware, software, and design questions about Microsemi SoC Products. The Customer Technical Support Center spends a great deal of time creating application notes, answers to common design cycle questions, documentation of known issues, and various FAQs. So, before you contact us, please visit our online resources. It is very likely we have already answered your questions.

### Technical Support

Visit the Customer Support website ([www.microsemi.com/soc/support/search/default.aspx](http://www.microsemi.com/soc/support/search/default.aspx)) for more information and support. Many answers available on the searchable web resource include diagrams, illustrations, and links to other resources on the website.

### Website

You can browse a variety of technical and non-technical information on the SoC home page, at [www.microsemi.com/soc](http://www.microsemi.com/soc).

## Contacting the Customer Technical Support Center

Highly skilled engineers staff the Technical Support Center. The Technical Support Center can be contacted by email or through the Microsemi SoC Products Group website.

## Email

You can communicate your technical questions to our email address and receive answers back by email, fax, or phone. Also, if you have design problems, you can email your design files to receive assistance. We constantly monitor the email account throughout the day. When sending your request to us, please be sure to include your full name, company name, and your contact information for efficient processing of your request.

The technical support email address is [soc\\_tech@microsemi.com](mailto:soc_tech@microsemi.com).

## My Cases

Microsemi SoC Products Group customers may submit and track technical cases online by going to My Cases.

## Outside the U.S.

Customers needing assistance outside the US time zones can either contact technical support via email ([soc\\_tech@microsemi.com](mailto:soc_tech@microsemi.com)) or contact a local sales office. Sales office listings can be found at [www.microsemi.com/soc/company/contact/default.aspx](http://www.microsemi.com/soc/company/contact/default.aspx).

## ITAR Technical Support


For technical support on RH and RT FPGAs that are regulated by International Traffic in Arms Regulations (ITAR), contact us via [soc\\_tech\\_itar@microsemi.com](mailto:soc_tech_itar@microsemi.com). Alternatively, within My Cases, select Yes in the ITAR drop-down list. For a complete list of ITAR-regulated Microsemi FPGAs, visit the ITAR web page.

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## Documents / Resources

	<a href="#">Microsemi IGLOO2 HPMS Single Error Correct / Double Error Detect</a> [pdf] User Guide IGLOO2 HPMS Single Error Correct Double Error Detect, IGLOO2, HPMS Single Error Correct Double Error Detect, Double Error Detect
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## References

-  [Microsemi | Semiconductor & System Solutions | Power Matters](#)
-  [IGLOO® 2 FPGAs | Microchip Technology](#)
-  [Libero® SoC Design Suite Versions 2023.1 to 12.0 | Microchip Technology](#)
-  [Libero® SoC Design Suite Versions 2023.1 to 12.0 | Microchip Technology](#)

-  [Libero® SoC Design Suite Versions 2022.3 to 12.0 | Microchip Technology](#)
-  [Libero® SoC Design Suite Versions 2023.1 to 12.0 | Microchip Technology](#)
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