



# RapidIO MegaCore Function

April 2006, MegaCore Function Version 3.0.1

Errata Sheet

This document addresses known errata and documentation issues for the Altera® RapidIO™ MegaCore® function version 3.0.1. Errata are functional defects or errors, which may cause the RapidIO MegaCore function to deviate from published specifications. Documentation issues include errors, unclear descriptions, or omissions from current published specifications or product documents.

Table 1 shows the issues that affect the RapidIO MegaCore function v3.0.1.

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For the most up-to-date errata for this release, refer to the errata sheet on the Altera website:

[www.altera.com/literature/es/es\\_rapidio\\_301.pdf](http://www.altera.com/literature/es/es_rapidio_301.pdf)

# Unsupported Features

This section describes the RapidIO MegaCore function v3.0.1 unsupported features.

### **SWRITE Request Packets Are Not Supported**

Type 6 Streaming-Write (SWRITE) request packet formats are not supported in version 3.0.1 They cannot be generated or processed.

#### *Affected Configurations*

This issue affects all configurations that include the Input/Output (I/O) Logical layer.

#### *Design Impact*

Cannot use or generate SWRITE packets.

#### *Workaround*

Use write request (NWRITE) packets instead.

#### *Solution Status*

This issue will be fixed in the next release of the RapidIO MegaCore function.

### **NWRITE\_R Request Packets Are Not Supported**

Type 5 Write with response (NWRITE\_R) request packets are not supported in version 3.0.1 They cannot be generated or processed.

#### *Affected Configurations*

This issue affects all configurations that include the I/O Logical layer.

#### *Design Impact*

Cannot use or generate NWRITE\_R packets.

#### *Workaround*

Use NWRITE packets instead.

## Functional Behavior

### *Solution Status*

This issue will be fixed in the next release of the RapidIO MegaCore function.

This section describes functional behavior issues.

### **The MegaCore Function Fails to Signal Maintenance Read Request Errors**

When the Type 8 Maintenance Read request is out of bounds because of an invalid address or disabled window), the interrupt (`irq`) signal is asserted high but the `readdatavalid/readerror` signals are not asserted as expected.

### *Affected Configurations*

This issue affects all configurations that include the Maintenance I/O Slave Logical layer module.

### *Design Impact*

The Avalon® slave pipeline read is out of order if the maintenance read request is out of bounds.

### *Workaround*

Verify that the maintenance read requests are valid.

### *Solution Status*

This issue will be fixed in the next release of the RapidIO MegaCore function.

### **The RapidIO I/O Write Short Packet Is Formatted Improperly**

If a short packet is generated from the I/O write Avalon interface with a burst count of 1 and 32-bit data path, the payload of the resulting RapidIO packet is not padded to double word length.

### *Affected Configurations*

This issue affects all configurations that include the I/O Logical layer.

### *Design Impact*

The payload contains only 32-bit data from the Avalon interface, and the payload is not padded with additional data to 64 bits.

### *Workaround*

Use burst counts of 2 or more.

### *Solution Status*

This issue will be fixed in the next release of the MegaCore function.

## **Word Ordering Is Incorrect Inside RapidIO Packets**

The order of the two 32-bit words that form a 64-bit double word within the payload of RapidIO input/output packets is reversed. In transmitted packets, the least significant word of a double word is transmitted first whereas the most significant word should be transmitted first. Similarly, in received packets, the first word received is assumed to be the least significant word of the double word.

### *Affected Configurations*

This issue affects all variations of the MegaCore function that implement the I/O Logical Layer.

### *Design Impact*

There is no impact when Altera MegaCore functions are used at both ends of the link.

### *Workaround*

There is no workaround.

### *Solution Status*

This issue will be fixed the next release of the RapidIO MegaCore function.

## **An Incorrect CRC Is Generated for Short Serial RapidIO Packets of Six Bytes**

The CRC generated for short packets of 6 bytes is incorrect in serial RapidIO variations with 64-bit wide data paths.

### *Affected Configurations*

This issue affects all serial 64-bit data path variations of the MegaCore function.

### *Design Impact*

The CRC is incorrect.

### *Workaround*

If possible, use packets longer than 6 bytes such as packets carrying payload data (NWRITE and SWRITE) which do not require a response packet.

### *Solution Status*

This issue will be fixed in the next release of the MegaCore function.

## Generation

This section describes the generation issues.

### **IP Toolbench Fails When Generating a MegaCore Function Variation if the I/O Logical Layer or I/O Maintenance Logical Layer Is Enabled but the Transport Layer Is not.**

If you try to generate a MegaCore variation with either the input/output maintenance module or Input/Output logical interface but not the Transport layer, IP Toolbench fails with an error.

### *Affected Configurations*

This issue affects all configurations that include the I/O Logical layer or I/O Maintenance Logical layer.

### *Design Impact*

You cannot generate the MegaCore function variation.

### *Workaround*

Always enable the transport layer when upper layer functionality is required.

### *Solution Status*

This issue will be fixed in the next release of the MegaCore function.

## Device Support

This section describes the device issues.

### **IP Toolbench Fails When Generating IP Functional Simulation Models for HardCopy Stratix Devices**

If you select **HardCopy Stratix** in the MegaWizard® Plug-In Manager and you turn on **Generate Simulation Model** and Generate a MegaCore function variation, IP Toolbench fails with an error.

#### *Affected Configurations*

This issue affects all configurations.

#### *Design Impact*

You cannot generate an IP functional simulation model.

#### *Workaround*

Select the Stratix family in the MegaWizard Plug-In Manager.

#### *Solution Status*

This issue will be fixed in a future release of the Quartus® II software.

## Contact Information

For more information, contact Altera's mySupport website at [www.altera.com/mysupport](http://www.altera.com/mysupport) and click **Create New Service Request**. Choose the **Product Related Request** form.

## Revision History

Table 2 shows the revision history for the *RapidIO MegaCore Function v3.0.1 Errata Sheet*.

**Table 2. RapidIO MegaCore Function v3.0.1 Errata Sheet Revision History**

Version	Date	Errata Summary
1.1	April 2006	<p>Added the following issues:</p> <ul style="list-style-type: none"> <li>● “SWRITE Request Packets Are Not Supported” on page 2.</li> <li>● “NWRITE_R Request Packets Are Not Supported” on page 2.</li> <li>● “The MegaCore Function Fails to Signal Maintenance Read Request Errors” on page 3.</li> <li>● “The RapidIO I/O Write Short Packet Is Formatted Improperly” on page 3.</li> <li>● “Word Ordering Is Incorrect Inside RapidIO Packets” on page 4.</li> <li>● “An Incorrect CRC Is Generated for Short Serial RapidIO Packets of Six Bytes” on page 4.</li> <li>● “IP Toolbench Fails When Generating a MegaCore Function Variation if the I/O Logical Layer or I/O Maintenance Logical Layer Is Enabled but the Transport Layer Is not” on page 5.</li> <li>● “IP Toolbench Fails When Generating IP Functional Simulation Models for HardCopy Stratix Devices” on page 6.</li> </ul>
1.0	January 2006	First release.



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