**BUFFER ISSUE RESOLUTION DOCUMENT (BIRD)**

**BIRD NUMBER:** 207

**ISSUE TITLE:** New AMI Reserved Parameters Component\_Name and Signal\_Name

**REQUESTOR:**  Randy Wolff, Micron Technology

**DATE SUBMITTED:** July 29, 2020

**DATE REVISED:**

**DATE ACCEPTED:** October 9, 2020

**DEFINITION OF THE ISSUE:**

IBIS-AMI executable models can make use of Component name and signal\_name to identify a unique Tx or Rx buffer on a die. With both names passed into the executable model, it can use look-up tables to model unique buffer characteristics, such as a buffer-specific delay for DQ to DQS timing. Adding these Reserved Parameters will enable new modeling techniques for clock-forwarded architectures.

**SOLUTION REQUIREMENTS:**

The IBIS specification must meet these requirements:

Table : Solution Requirements

|  |  |
| --- | --- |
| Requirement | Notes |
| 1. Add the capability of passing the Component name into an IBIS-AMI executable model.
 |  |
| 1. Add the capability of passing the signal\_name into an IBIS-AMI executable model.
 |  |

**SUMMARY OF PROPOSED CHANGES:**

For review purposes, the proposed changes are summarized as follows:

Table : IBIS Keywords, Subparameters, AMI Reserved\_Parameters, and AMI functions Affected

|  |  |  |
| --- | --- | --- |
| Specification Item | New/Modified/Other | Notes |
| AMI Reserved Parameter Component\_Name | New |  |
| AMI Reserved Parameter Signal\_Name | New |  |

**PROPOSED CHANGES:**

*Parameter:* **Component\_Name**

*Required:* No, and illegal before AMI\_Version 7.1

*Direction:* Rx, Tx

*Descriptors*:

Usage:                   In

Type:                     String

Format:                  Value

Default:*<*string\_literal>

Description:<string>

*Definition:* Name of the IBIS [Component] keyword that is being used.

*Usage Rules:* The Value specified in the .ami file is ignored. The EDA tool must pass the name of the IBIS [Component] keyword that is being instantiated by the EDA tool through the input parameter strings to the AMI\_Resolve and AMI\_Init functions as the value of this parameter.

If the EDA tool is used in such a way that the name of the IBIS [Component] keyword is not available during simulation, then the EDA tool shall pass in an empty string ("").

Component\_Name must be present if Signal\_Name is present.  Component\_Name must be absent if Signal\_Name is absent.

*Other Notes:*

*Example:*

(Component\_Name (Usage In) (Type String) (Value "placeholder")

   (Description "The name of the instantiated IBIS Component")

)

*Parameter:* **Signal\_Name**

*Required:* No, and illegal before AMI\_Version 7.1

*Direction:* Rx, Tx

*Descriptors*:

Usage:                   In

Type:                     String

Format:                  Value

Default:*<*string\_literal>

Description:<string>

*Definition:* Name of the IBIS [Pin] keyword’s signal\_name sub-parameter that is being used.

*Usage Rules:* The Value specified in the .ami file is ignored. The EDA tool must pass the name of the IBIS [Pin] keyword’s signal\_name sub-parameter that is being instantiated by the EDA tool through the input parameter strings to AMI\_Resolve and AMI\_Init functions as the value of this parameter.

If the EDA tool is used in such a way that the name of the IBIS [Pin] keyword’s signal\_name is not available during simulation, then the EDA tool shall pass in an empty string ("").

Signal\_Name must be present if Component\_Name is present.  Signal\_Name must be absent if Component\_Name is absent.

*Other Notes:*

*Examples:*

(Signal\_Name (Usage In) (Type String) (Value "placeholder")

   (Description "The name of the instantiated IBIS Pin’s signal\_name sub-

 parameter")

)

**BACKGROUND INFORMATION/HISTORY:**