

IBIS FAQs

Q: What is IBIS?

A: IBIS (Input/Output Buffer Information Specification) is a type of behavioral model that describes the input/output characteristics of a device through I/V and V/T data.

Q: Is there a standard for IBIS?

A: IBIS is a recognized standard, ANSI/EIA-656A. The current standard version is 3.2 ratified in August 1999.

Q: Where can I get a copy of the IBIS specification?

A: Copies of the IBIS standard can be obtained from the IBIS Open Forum website at <http://www.eigroup.org/IBIS/Default.htm>.

Q: Why use IBIS?

A: IBIS files are used for signal integrity simulations of high-speed boards or systems. IBIS has the advantages over SPICE of faster simulation times, and do not contain any confidential circuit design or process information. They also tend to run on a wide variety of simulation engines.

Q: Where can I get IBIS files?

A: IBIS files for National Semiconductor devices can be obtained at <http://www.national.com/models/ibis/>. The IBIS Open Forum also keeps a list of available IBIS files from different vendors at <http://www.eigroup.org/IBIS/ibis%20table/models.htm>.

Q: How are IBIS files created?

A: IBIS files can be created by simulation or from bench measurements. IBIS files generated from SPICE simulations generally include minimum, typical, and maximum process corner data. IBIS files generated from the bench generally only include typical process corner data.

Q: How do I use an IBIS file?

A: IBIS files can be used in most signal integrity simulators. Some simulators require that the IBIS file be translated to the simulator specific model format.

Q: How can I view the data in an IBIS file?

A: The data in an IBIS file can be extracted into an Excel spreadsheet for viewing or other software can be used to view the data. The IBIS Open Forum provides links to free software tools to view and edit IBIS files at <http://www.eigroup.org/IBIS/tools.htm>.

Q: Can an IBIS file represent differential devices such as LVDS?

A: Yes, IBIS can support LVDS and other differential devices. As new technologies emerge, the IBIS specification is continually being updated to meet these needs.

Q: What is the C_comp parameter?

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A: The C_comp parameter defines the input or output die capacitance. This includes parasitic capacitance from the transistor and circuit elements, capacitance due to metallization, and pad capacitance. This does not include package capacitance as it is accounted for separately.

Q: How is the package defined in an IBIS file?

A: The IBIS specification defines that the I/V and V/T data should not contain any package effects. The package data is defined under its own keyword. The package model can be defined by a lumped element containing a resistance, inductance, and capacitance. More advanced package models such as full matrices are supported as well.