

# IBIS Importance for SI and PI

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An SAE Industry Technologies Consortia Program

# What is the IBIS Group About Today?



## • Not Just IO Buffer Model

- IBIS Spec Supports
  - IO Buffer
    - IV/VT/IT
    - Linear and non-linear IO
    - Simple R to complex S-Parameter impedance models
  - Algorithmic Modeling (AMI)
  - Package Modeling
    - RLC
    - Transmission line
    - Coupled models
    - Sparameters
  - PCB Models
    - EBD(Electrical Poard Description)
    - EMD (Electrical Module Description)
  - EMI Parameters
  - Power Integrity models
- Other Specifications:
  - IBIS Interconnect Modeling
  - IBIS Interconnect Spice Subcircuits
  - TouchstoneFile format
    - Touchstone 2.1
    - Touchstone 3.0 (In Development)
  - IBIS Quality
- Parsers
  - IBISCHK
  - TSCHK
- IBIS Accuracy Handbook

# Active IBIS Work



- IBIS 8.0 Released in December 2025
- IBISCHK 8.0 in Development
  - Target release June 2026
- IBIS BIRD's 234 & 235
  - Define parameters required for Power deliver models
  - Standardized PI Models as was done for SI models
- Touchstone 3.0
  - Improved models with standardized Pole –Residue representation
    - Decreases file size
  - Standardize Port Mapping



# The IBIS Advantage

- Standardized models provide:
  - Portable models between vendor tools
  - Known requirements for data needed for model development
  - Ability to check syntax of models (IBISCHK & TSCHK)
- Quality Models
  - 5 Levels of Buffer model checks
  - 4 Levels of package model
  - Component Pin requirement checking
  - ***As a Customer, Demand models meet specific quality metrics***
- Simulations require verified inputs
  - ***IBIS provides a working, standardized solution***

# A Free Open Standard for SI & PI Models



- IBIS Open Forum (IOF)
  - Any company can attend meetings and use specification for free!
  - Member organizations have voting rights
    - Helps steer focus based upon industry needs
  - Volunteer members
    - We need EDA and Design organizations to be members of IBIS
    - An active membership drives innovation and capabilities
    - A larger active membership allows for more simultaneous capability development
    - A great way to be professionally recognized
- Participation
  - IOF
  - Summit papers
- Who should be involved
  - Computer development
  - Network Development
  - Aerospace
  - Automotive
  - IOT

# IBIS Website Resources



- IBIS Summits →
- Task Group Info →
- Member FAQ →
- Spec documents →
- \*IRDs →
- Email support →
- Syntax Parser →
- Downloads →

**Welcome to the IBIS Open Forum**

- Upcoming Events**
- Past Summits
- Open Forum**
- Minutes
- Regional Forums**
- China
- Task Groups**
- ATM
- Quality
- Interconnect
- Editorial
- Members**
- Membership FAQ
- Roster
- Specifications**
- BIRDs
- ISSIRDs
- TSIRDs
- Models**
- Support**
- Model Review
- Training
- FREE Tools**
- IBIS Parsers**
- IBISCHK
- IBISCHK Bugs
- TSCHK
- TSCHK Bugs
- IBIS Cookbook**
- Accuracy Handbook
- IBIS Quality Spec
- Site Map**
- About IBIS
- Officers
- Articles
- FAQ

**NEW** IBIS Version 8.0 is approved and available for download!

**NEW** 2026 Hybrid DesignCon IBIS Summit Registration  
 Register to join the meeting on-line or in-person in Santa Clara, CA on Friday, February 27, 2026

**DESIGNCON<sup>®</sup> 2026**  
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**Our Specifications**

I/O Buffer Information Specification	<a href="#">(IBIS 8.0)</a> <a href="#">(SAE/EIA-STD-656-B)</a> <a href="#">(IEC-62014-1)</a>
IBIS Interconnect Modeling Specification	<a href="#">(ICM 1.1)</a> <a href="#">(SAE/GEIA-STD-0001)</a>
IBIS Interconnect SPICE Subcircuit Specification	<a href="#">(IBIS-ISS 1.0)</a>
Touchstone® File Format Specification	<a href="#">(Touchstone 2.1)</a>

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We welcome participation  
by all IBIS model makers,  
EDA tool vendors, IBIS model  
users, and interested parties.