CALIBER SI & PI Capabilities

Caliber Interconnect Solutions (Pvt) Ltd
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Mission & Vision

Mission

“Provide dependable solutions to the satisfaction of the customers through intensive R&D and proven quality control procedures using disciplined workforce.”

Vision

“Developing and applying technological solutions to the benefits of the society that will not affect the safety and living standards of our future generations.”

Quality Policy

“CALIBER INTERCONNECT SOLUTIONS PRIVATE LIMITED is committed to meet and exceed customers expectations through timely delivery of cost effective quality designs through ever improving process and team work.”
SI & PI CAPABILITIES

We have Simulation expertise in areas, including, but not limited to the below summarized descriptions.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>SERVICE OFFERED</th>
<th>BRIEF DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Via impedance optimization</td>
<td>- using Full wave EM solver</td>
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<tr>
<td></td>
<td>S-Parameter extraction</td>
<td>- using ANSYS Siwave ; Cadence Sigity PowerSI</td>
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<td></td>
<td>TDR impedance plot</td>
<td>- using the TDR result to optimize on channel performance</td>
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<tr>
<td>SI</td>
<td>Time domain analysis</td>
<td>- to generate various waveforms</td>
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<td></td>
<td></td>
<td>- Simulation using IBIS-AMI simulation models</td>
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<td>- Eye diagram generation</td>
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<tr>
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<td>- Skew calculation</td>
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<tr>
<td></td>
<td></td>
<td>- Various interface compliance</td>
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<tr>
<td></td>
<td></td>
<td>- DDR2,3,4 ; PCIe ; SERDES Channel ; USB ; QSFP ; HDMI etc.,</td>
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<tr>
<td></td>
<td>RF channel analysis</td>
<td>- Matching network analysis, RF analysis analysis etc.</td>
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<td></td>
<td>Crosstalk analysis</td>
<td>- pre and post layout</td>
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<td></td>
<td>RLGEC Extraction</td>
<td>- using Full wave EM solver</td>
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<tr>
<td></td>
<td>EMI / EMC test</td>
<td></td>
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<tr>
<td></td>
<td>Failure board analysis</td>
<td>- To find the possible reason for failure of a board using simulation</td>
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## SI & PI CAPABILITIES

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<tr>
<td>PI</td>
<td>DC IR drop analysis</td>
<td>- validating whether the power net will carry the required current</td>
</tr>
<tr>
<td></td>
<td>Power impedance Z11 analysis</td>
<td>- validating whether the power net has low enough impedance to cause less voltage ripple</td>
</tr>
<tr>
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<td>Decap optimization</td>
<td>- optimizing the capacitor values to achieve the impedance target</td>
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<td></td>
<td>Time domain analysis</td>
<td>- simulating the voltage ripple using the IC current consumption values</td>
</tr>
<tr>
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<td>SSN / SSO analysis</td>
<td>- combined simulation of SI and PI effects</td>
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<tr>
<td>THERMAL</td>
<td>Thermal simulation</td>
<td>- using the components thermal parameters</td>
</tr>
<tr>
<td></td>
<td>Thermal / Electrical co-simulation</td>
<td>- to include the joule heating effect in analyzing the Power nets</td>
</tr>
</tbody>
</table>
We have expertise in the following simulation tools

- ANSYS SiWAVE
- ANSYS Designer
- Cadence Sigrity Products
  - PowerSI
  - PowerDC
  - OptimizePI
Global Presence

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Thank You

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