PCI-SIG ENGINEERING CHANGE NOTICE

<table>
<thead>
<tr>
<th>TITLE:</th>
<th>M.2 SSIC Eye Limits Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE:</td>
<td>December 02, 2015</td>
</tr>
<tr>
<td>AFFECTED DOCUMENT:</td>
<td>M.2 Spec Revision 1.0</td>
</tr>
<tr>
<td>SPONSOR:</td>
<td>Intel Corp</td>
</tr>
</tbody>
</table>

**Part I**

1. **Summary of the Functional Changes**

   Definition of electrical eye limits (Eye Height and Eye Width) at the M.2 connector for SSIC host and device transmitter is proposed to be added in the specification.

2. **Benefits as a Result of the Changes**

   Will allow to test the interoperability between SSIC host and SSIC device at the M.2 socket level.

3. **Assessment of the Impact**

   This will not affect current usage of these signals.

4. **Analysis of the Hardware Implications**

   N/A

5. **Analysis of the Software Implications**

   N/A

6. **Analysis of the C&I Test Implications**

   N/A
Part II

Detailed Description of the change

Update section 1.3 Specification References as follows:

- **FC BUS Specifications**, Version 2.1, January 2000
- EIA-364 Electrical Connector/Socket Test Procedures including Environmental Classifications
- EIA-364-1000 01: Environmental Test Methodology for Assessing the Performance of Electrical Connectors and Sockets Used in Business Office Applications
- **M-PHY- M/P® Alliance Specification for M-PHY™**, Version 3.0

Add section 6.7 in Chapter 6:

6.7 Eye Limits For SSIC at the M.2 Connector

Transmitter Eye Height and Eye Width limits at the M.2 connector for SSIC Host and SSIC Device transmitter are defined in Table X. This helps to test the interoperability between SSIC host and SSIC device at the M.2 connector. The eye diagrams are evaluated after the behavioral CDR defined in the MPHY Specification is applied. The eye limits given below are recommendations only.

<table>
<thead>
<tr>
<th>Table X: SSIC Transmitter Eye Limits at the connector</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye Height at M.2 Socket (mV)</strong></td>
</tr>
<tr>
<td>SSIC Device Transmitter</td>
</tr>
<tr>
<td>SSIC Host Transmitter</td>
</tr>
</tbody>
</table>

1. Assumes that the signal has been captured using a break-out fixture that is ~1” long (~0.33dB loss @ 1.455 GHz)
2. The recommended sample size for this measurement is at least $10^6$ UI
3. Eye measurements require that CRPAT (Refer to M-PHY specification) is being transmitted during the test
4. The measurements are applicable to Terminated HS mode of MPHY
5. The Eye Width limits are applicable at Target BER of $10^{-10}$
6. The eye limits are applicable to the MPHY HS gears G1, G2 and G3