Proposed Serial ATA Draft International Organization

SATA31_ECN_D151_20120213_V03
Title: Hardware Feature Control Correction

Proposed correction to Serial ATA Revision 3.1

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Author Information

<table>
<thead>
<tr>
<th>Author Name</th>
<th>Company</th>
<th>e-mail address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yun Wang</td>
<td>ULINK Technology</td>
<td><a href="mailto:yun.wang@ulinktech.com">yun.wang@ulinktech.com</a></td>
</tr>
<tr>
<td>Jim Hatfield</td>
<td>Seagate</td>
<td><a href="mailto:james.c.hatfield@seagte.com">james.c.hatfield@seagte.com</a></td>
</tr>
</tbody>
</table>

Workgroup Chair Information

<table>
<thead>
<tr>
<th>Workgroup</th>
<th>Chairperson Name</th>
<th>e-mail address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital</td>
<td>Jim Hatfield</td>
<td><a href="mailto:james.c.hatfield@seagte.com">james.c.hatfield@seagte.com</a></td>
</tr>
</tbody>
</table>

Document History

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<th>Comments</th>
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<tr>
<td>0</td>
<td>01/18/2012</td>
<td>Initial draft</td>
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<tr>
<td>1</td>
<td>02/10/2012</td>
<td>Added an intro sentence to match the style of other set features subcommands</td>
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<tr>
<td>2</td>
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<td>Removed the ‘disable’ text, because this function cannot be disabled by command. Restored the requirement to disable at power on reset (inadvertantly removed)</td>
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<td>3</td>
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1 Introduction

On the SATA-IO Digital WG reflector on Dec. 15, 2011, it was reported that SATA Revision 3.1 has an error regarding the SET FEATURES Hardware Feature Control command.

2 Summary of the problem

2.1 SET FEATURES

Problem:

SATA Revision 3.1 incorrectly states that Count(7:0) is reserved. Count(7:0) is actually used to specify the Feature Identification Values (e.g. SATA sub-subcommand) for the SET FEATURES subcommand.

SATA Revision 3.1 says:

13.3.8 Enable Hardware Feature Control
See 13.19 for additional information about Hardware Feature Control.

This function enables Hardware Feature Control. Hardware Feature Control shall be disabled by power-on reset.

Count(7:0) is reserved.

LBA(15:0) contains a function identifier (see Table 89).

3 Proposed corrections

[editor note: New text is marked as underlined in blue color. Material to be deleted is red with strikethrough markings.]

3.1 SET FEATURES Enable Hardware Feature Control

Recommendation:
Change SATA Revision 3.1:

13.3.8 Enable Hardware Feature Control
A Count (7:0) value of 08h is used by the host to enable Hardware Feature Control. See 13.19 for additional information about Hardware Feature Control.

This function enables Hardware Feature Control. Hardware Feature Control shall be disabled by power-on reset.

Count(7:0) is reserved.

LBA(15:0) contains a function identifier (see Table 89).