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Conventional PCI 3.0 & 2.3: An Evolution of the Conventional PCI Local Bus Specification

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Conventional PCI Revision 3.0

Revision 3.0 completes the evolutionary migration plan for the PCI Local Bus Specification, migrating the PCI bus from the original 5.0V signaling to a 3.3V signaling bus. Revision 2.3 began that evolution by removing support for the 5V keyed add-in card, while providing support for both the 5V and 3.3V keyed system board connectors. Revision 3.0 takes the next step of removing support for the 5V keyed system board connector. Revision 3.0 continues support for the 3.3V keyed system board connector, which supports the 3.3V and Universal keyed add-in cards. PCI 66, PCI-X, Mini PCI, and Low Profile PCI also support only 3.3 volt signaling on 3.3V keyed system board connectors and 3.3V and Universal keyed add-in cards.

High performance technologies power the logic within the chips with 3.3 or lower voltages. The newer high performance technologies cannot support 5 volt compatible signaling on the off-chip drivers. As a result, the host bridge needs to migrate to 3.3 volt signaling with 3.3V keyed system board connectors. Removing support for the 5V keyed system board connector completes the steps in the migration to 3.3 volt signaling

systems and ensures revision 3.0 compliant add-in cards will be usable in 3.3V keyed system board connectors.

In addition to the changes described above, Revision 3.0 also incorporates the Revision 2.3 errata and ECNs.

Conventional PCI Revision 2.3

Revision 2.3 is an evolutionary change to the PCI Local Bus Specification. Revision 2.3 makes a significant step in migrating the PCI bus from the original 5.0 volt signaling to a 3.3 volt signaling bus. Revision 2.3 supports the 5V and 3.3V keyed system board connectors (as did revision 2.2) but revision 2.3 supports only the 3.3V and Universal keyed add-in cards. The 5V keyed add-in card is not supported in revision 2.3. PCI 66, PCI-X, Mini PCI, and Low Profile PCI support only 3.3 volt signaling on 3.3V keyed system board connectors and 3.3V and Universal keyed add-in cards.

High performance technologies power the logic within the chips with 3.3 or lower voltages. The newer high performance technologies cannot support 5 volt compatible signaling on the off-chip drivers. As a result, the host bridge needs to migrate to 3.3 volt signaling with 3.3V keyed system board connectors. Removing support for 5V keyed add-in cards is the first step in the migration to 3.3 volt signaling systems and ensures revision 2.3 compliant add-in cards will be usable in 3.3V keyed system board connectors.

In addition to the changes described above, revision 2.3 also incorporates other ECNs and approved errata.

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