1-port 400 Mbps physical layer interface   PDI1394P25

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ERRATA FOR THE PHILIPS PDI1394P25 PHYSICAL LAYER CONTROLLER

(This errata refers only to datasheet version dated 2001 Oct 12)

E-1   SHORT DATA PREFIX HOLD BEHAVIOR RELATED TO SUSPEND AND RESUME

Description of expected operation: Data prefix hold times signaled to the PDI1394P25 that are shorter than 42 ns (63 ns for the data prefix of a concatenated packet) should not cause a suspension of the port attached to the PDI1394P25.

Description of observed behavior: During the testing of PDI1394P25, a potential issue related to an incorrect speed signal was identified. This sensitivity relates to data prefix hold times issued by connecting nodes. A data prefix signal of less than 42 ns (63 ns for data prefix of a concatenated packet) can sometimes cause the P25 to send out an extra long speed signal which discharges the bias capacitor on the connected node. If this were to occur, the loss of bias could cause the connected node to suspend the affected port, which would cause the P25 to suspend its port as well.

Special note: This event was found during evaluation testing using static timing generators and the PDI1394P25. Based upon known link speeds and after testing with released devices in the market, we can find no real world situation where this suspension can occur.

Solution or work around: Although it is very unlikely for this situation to occur, to prevent an inadvertent suspension from happening, the application associated with the PDI1394P25 phy should monitor interrupts signaled to the link for a port suspension. When a suspension occurs, the application should initiate a resume.

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