

SATA-A-006187 Spread Spectrum Support Erratum

- **SATA-A-006187:** Intermittent non-recoverable transient data integrity error seen when booting from SATA drives with SSC enabled
- **Devices:** 8536/35, 837x, 8314/15, P1010/14 and P1022/13
- **Description:** The SATA standard allows for an optional spread spectrum clocking (SSC) of the transmitter clock to lower EMI emission. Intermittently, when booting from SATA drives with SSC enabled, the host controller may report that a data integrity error has occurred that is not recovered by the interface. The device will report data integrity errors, when the following status bit fields in the SATA error register reflect the conditions below:
 - SATA interface error register, SError[bits CRC, D, B, E, T]
 - Command error register, CER[bit CEn]
 - Device error register, DER[bit DEn]
- **Workaround:** To avoid the erratum, choose one of the following options:
 - **Option 1 :** (For P1010/14 and P1022/13): Implement the following sequence in the SATA driver:
 1. Clear the SError, CER and DER registers
 2. Clear all of the interrupts in the HStatus register
 3. Reset the hard drive
 4. Resend the READ command
 - **Option 2 :** (For 8536/35, 837x, 8315/14): Disable SSC on the SATA drive
- **Fix plan:**
 - No plans to fix