SATA-A-005255 Failure to Detect Single SYNC Primitive

- **Devices**: MPC837x, MPC8314/15 & P1022/13. For P1010/14, Customers have been notified through PCN 15869

- **Description:** When a single SYNC primitive is sent between the WTRM and XRDY primitives, the host controller may fail to detect this primitive. This can cause the host controller link state machine to remain in the "ending" state. As a result, the controller will not be able to return to the "idle" state, will not respond to the XRDY primitive stream and will not set corresponding command completion event

- **Impact**: SATA devices that send a single SYNC primitive after a read transaction may fail proper operation. However, there are many SATA devices will send more than one SYNC primitive after a read transaction and are not impacted by this erratum.

- **Workaround:** There is no workaround. If the device sends a single SYNC primitive and the host controller fails to detect it, the software will time out waiting for command completion event. To recover, the software can re-initialize the SATA Link by clearing HCONTROL[HC_ON] to 0x0 and then setting it to 0x1

- **Fix plan:** No plans to fix

freescale ™

SATA-A-005636 : Auto-activate feature enabled in DMA setup command causes timeout

- **Devices :** MPC837x, MPC8135/14, P1010/14 & P1022/13

- **Description:** When NCQ is enabled, the SATA controller does not support DMA setup FIS with autoactivate enabled from the device. The SATA host may timeout without finishing the transaction

- **Impact:** This will have a minor performance impact as disabling the auto-activate feature requires the device to send a DMA setup as well as a DMA activate FIS to enable reception of the first data FIS

- **Workaround:** Software can work around this with one of the following options:

  - Disable the DMA setup auto-activate feature by a set features command

  - Or, Disable NCQ by setting the queue depth to one

- **Fix plan:** No plans to fix

freescale ™

freescale™