288 Write To A F4x184 Register May Access Incorrect Array Register

Description

The contents of the Link Phy Offset Register (F4x180) may be used at the time of the write into the Link Phy Data Port register (F4x184) to determine which set of registers is being accessed. Since the software does not write F4x180 until after F4x184 when performing an array write operation, this may result in the array write not occurring or going to an unpredictable array register.

Potential Effect on System

Unpredictable results may occur.

Suggested Workaround

The registers accessed by F4x184_x[N:0] can be split into four spaces

1. Direct map registers (When DirectMapEn is 1b)
2. Link FIFO Read Pointer Optimization Registers (offsets CFh and DFh)
3. BIST registers (offsets 100h to 144h)
4. Phy registers (offset E0h)

Before performing a write to a F4x184_x[N:0] array register, when the value (i.e. from a previous access) in LinkPhyOffset or DirectMapEn maps to a different space (as defined above), software should first perform a read operation to the intended array register.

No workaround is necessary when performing an array read access or when no space switch is involved.

Fix Planned

No