

SANKHYA Teraptor – POWERPC Channel Release 1.0

Release Notes

November 2013

1. Introduction

Teraptor is a suite of languages and tools for integrated processor and system(programmable system) design and development. The POWERPC channel for Teraptor provides with readily available SMDL models for IBM POWERPC 750

2. Whats New

2.1. What's New in Release 1.0

This is the first release of Teraptor Channel for POWERPC. It includes the following components

- SMDL models for IBM POWERPC750 (models/POWERPC*.md)
 - SMDL models for POWERPC may be used to prototype systems based on IBM POWERPC750
- Samples (samples/powerpc)
 - This directory contains demo applications that illustrate running various programs created to work on a POWERPC machine using the SMDL Models for POWERPC Instruction Set Architecture.

3. Host Platforms

The host platforms supported include the following

- Windows XP
- Windows 7
- Red Hat Enterprise Linux 3.x
- Red Hat Enterprise Linux 5.x

4. Known Limitations and Defects

Limitations

- SMDL models for POWERPC doesnt support instructions that perform direct operation on

devices like TLB, SLB related, mtdcr, mfdcr, instruction and data cache related.

- Synchronization instructions are modeled as nop.
- Few instructions are not currently modeled like Frsrqte[.], mfsrin, mtsrin, psq_lx, psq_lux, psq_stx, psq_stux, ps_rsrqte[.]
- Interrupt routines are not currently modeled
- Load store multi word and multi string doesnt work as expected when the number bytes to be loaded or stored is not a multiple of 4 (The final byte load/store is done incorrectly)

Defects

- TERA-20 Interrupt routines are not implemented
- TERA-21 Instructions involving device interfacing are not implemented
- TERA-22 Synchronization instructions perform a “nop”
- TERA-23 multi word and multi string load store instructions perform wrong computation on the last bytes if the total number of bytes is not a multiple of 4
- TERA-24 Instructions Frsrqte[.], mfsrin, mtsrin, psq_lx, psq_lux, psq_stx, psq_stux, ps_rsrqte[.] are not implemented

5. Defects Resolved

6. Trademarks

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7. Contact Information

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