Introduction to PowerPC System Software

Contents

Overview of the PowerPC System Software 1-4
The 68LC040 Emulator 1-6
  Emulator Operation 1-7
  Emulator Limitations 1-8
    Coprocessors 1-9
    Instruction Timings 1-9
    Deleted Instructions 1-9
    Unsupported Instruction Features 1-10
    Instruction Caches 1-10
    Address Error Exceptions 1-10
    Bus Error Exceptions 1-11
    Memory-Mapped I/O Locations 1-11
Mixed Mode 1-13
  Cross-Mode Calls 1-14
  Routine Descriptors 1-15
  Memory Considerations 1-19
The PowerPC Native Environment 1-19
  Fragments 1-20
    The Structure of Fragments 1-22
    Imports and Exports 1-23
    The Table of Contents 1-26
    Special Routines 1-29
    Fragment Storage 1-30
    Executable Resources 1-34
  Calling Conventions 1-41
    The 680x0 Calling Conventions 1-42
    The PowerPC Calling Conventions 1-43

Parameter Passing 1-47
Import Libraries 1-50
The Organization of Memory 1-52
File Mapping 1-53
The System Partition 1-56
Application Partitions 1-57
Data Alignment 1-63
Compatibility and Performance 1-65
Patches 1-66
The Memory Manager 1-68
Performance Tuning 1-70
Mode Switches 1-71
Routine Parameters 1-72