# List of Tables


**Table 1-1** CPU Modules and System Names 5
**Table 1-2** Number of TLB Entries by Processor Type 9
**Table 1-3** Cache Algorithm Selection 23
**Table 4-1** VME Bus PIO Bandwidth 66
**Table 4-2** EISA Bus PIO Bandwidth (32-Bit Slave, 33-MHz GIO Clock) 70
**Table 4-3** EISA Bus PIO Bandwidth (16-Bit Slave, 33-MHz GIO Clock) 70
**Table 4-4** VME Bus Bandwidth, DMA Engine, D32 Transfer 73
**Table 5-1** Fields of the dsreq Structure 82
**Table 5-2** Flag Values for ds_flags 83
**Table 5-3** Return Codes From SCSI Operations 85
**Table 5-4** SCSI Status Codes 87
**Table 5-5** SCSI Message Byte Values 87
**Table 5-6** Fields of the dsconf Structure 88
**Table 5-7** dslib Function Summary 90
**Table 5-8** Lookup Tables in dslib 95
**Table 6-1** Functions for Outgoing External Signals 114
**Table 6-2** Functions for Incoming External Interrupts 115
**Table 8-1** Entry Points in Alphabetic Order 138
**Table 8-2** Use of Driver Entry Points 139
**Table 9-1** Functions to Manipulate Device Numbers 181
**Table 9-2** Header Files Often Used in Device Drivers 185
**Table 9-3** Functions for Kernel Virtual Memory 188
**Table 9-4** Functions for Allocating pollhead Structures 189
**Table 9-5** Functions for Allocating buf_t Objects and Buffers 190
**Table 9-6** Functions for Suballocation 191
**Table 9-7** Functions for General Data Transfer 192
**Table 9-8** Functions Moving Data Using uio_t 194

**Table 9-9** Functions to Test Physical Addresses 195
**Table 9-10** Functions to Manipulate a vhandl_t Object 196
**Table 9-11** Functions to Convert Bytes to Sectors or Pages 198
**Table 9-12** Functions Related to Physical Memory 199
**Table 9-13** Functions to Map Buffer Pages 199
**Table 9-14** Functions Related to Cache Coherency 200
**Table 9-15** Functions for User Process Management 202
**Table 9-16** Functions for Basic Locks 205
**Table 9-17** Functions for Mutex Locks 207
**Table 9-18** Functions for Sleep Locks 209
**Table 9-19** Functions for Reader/Writer Locks 211
**Table 9-20** Functions to Set Interrupt Levels 213
**Table 9-21** Functions for Timed Delays 214
**Table 9-22** Functions for Synchronizing Block I/O 217
**Table 9-23** Functions for Synchronization: sleep/wakeup 219
**Table 9-24** Functions for Synchronization: Synchronization Variables 220
**Table 9-25** Functions for Semaphores 222
**Table 10-1** Compiler Variables Tested by System Header Files 229
**Table 10-2** Compiler Options for 32-Bit Kernel Modules 230
**Table 10-3** Compiler Options for 64-Bit Kernel Modules 231
**Table 11-1** Commands for Symbol Conversion and Lookup 256
**Table 11-2** Commands to Control Execution 257
**Table 11-3** Commands to Manage Virtual Memory 259
**Table 11-4** Commands to Display Memory 260
**Table 11-5** Utility Commands 261
**Table 11-6** Commands to Display Memory and Symbols 265
**Table 11-7** Commands to Display Process Information 265
**Table 11-8** Commands to Display Locks and Semaphores 267
**Table 11-9** Commands to Display I/O Status 267
**Table 11-10** Commands to Display buf_t Objects 268
**Table 11-11** Commands to Display STREAMS Structures 268
**Table 11-12** Commands to Display Network-Related Structures 269
**Table 13-1** VME A16 Addressing in Crimson Systems 307

**Table 13-2** VME A24 Addressing in Crimson Systems 307
**Table 13-3** VME A32 Addressing in Crimson Systems (One Bus) 307
**Table 13-4** VME A32 Addressing in Crimson Systems (Two Buses) 308
**Table 13-5** Accessible VME Addresses in Each System 310
**Table 14-1** Functions to Create and Use PIO Maps 326
**Table 14-2** Functions That Operate on DMA Maps 330
**Table 14-3** Functions to Manage Interrupt Vector Values 332
**Table 15-1** Host Adapter Driver Classes 355
**Table 15-2** Host Adapter Function Summary 357
**Table 15-3** Input Fields of the scsi_request Structure 363
**Table 15-4** Values for the sr_flags Field of a scsi_request 364
**Table 15-5** Values Returned From a SCSI Command 366
**Table 15-6** Software Status Values From a SCSI Request 366
**Table 15-7** SCSI Status Bytes 367
**Table 15-8** Host Adapter Status After a SCSI Request 368
**Table 15-9** Adapter Error Codes 378
**Table 15-10** Primary Sense Key Error Table 379
**Table 15-11** Additional Sense Code Table 380
**Table 15-12** SCSI State Error Messages 384
**Table 16-1** Important Reference Pages Related to Network Drivers 395
**Table 16-2** Mutual Exclusion Macros for ifnet Drivers 398
**Table 17-1** Functions to Create and Use PIO Maps 439
**Table 17-2** Functions for IRQ and Channel Allocation 442
**Table 17-3** Functions That Operate on DMA Maps 445
**Table 17-4** Functions for EISA DMA 446
**Table 18-1** GIO Slot Names and Addresses 513
**Table 19-1** Multiprocessing STREAMS Functions 548
**Table 19-2** Kernel Entry Points 554
**Table A-1** Driver Exported Names 564
**Table A-2** Device Driver Interface Objects 565
**Table A-3** STREAMS Driver Interface Objects 566
**Table A-4** Kernel Functions 566