Appendix C. Europa Clipper FSW Modules

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| **Europa Clipper Flight Software Modules** | | | |
| **Module Name** | **Partition** | **Functional Category** | **WM (CURRENT TOTAL)** |
| Attitude Control System Manager | GNC | GNC | 21.5 |
| Analog-to-Digital Conversion | CORE PLATFORM | Engineering | 2.8 |
| Abstract Device Library | CORE PLATFORM | Software Infrastructure | 2.7 |
| Bus Controller Manager | CORE IO | Platform Services | 11.6 |
| BC 1553 Client Interface Service | CORE IO | Platform Services | 6.5 |
| BDS Diagnostics | BDS | BDS | 5.4 |
| BDS driver | BDS | BDS | 13.3 |
| BDS Executive - Controller (was nand manager) | BDS | BDS | 23.5 |
| BDS Logical Layer | BDS | BDS | 24.0 |
| BDS Physical Layer | BDS | BDS | 13.5 |
| BDS Science Insts Proxy | BDS | BDS | 17.9 |
| BDS Partition manager | BDS | BDS | 8.1 |
| BDS Status | BDS | BDS | 8.4 |
| Board Support Package/Real Time Operating System | CORE BOOT | Platform Services | 7.3 |
| Communication Behavior Controller | SYSTEM | Telecom | 11.1 |
| CCSDS File Delivery Protocol Service | CORE DATA | Telecom | 49.1 |
| Command Service | CORE UPLINK | Spacecraft Services | 16.0 |
| Rad750 CPU Driver | CORE PLATFORM | Platform Services | 6.5 |
| CRC Manager | CORE UPLINK | Platform Services | 4.2 |
| Cross String Manager | CORE IO | Spacecraft Services | 18.0 |
| Data Partition Manager | CORE DATA | Platform Services | 4.3 |
| Rad750 DMA Driver | CORE PLATFORM | Platform Services | 3.6 |
| Data Product Consignment Service (client interface) | CORE DATA | Spacecraft Services | 18.2 |
| Data Product Management Service (and Catalog) | CORE DATA | Spacecraft Services | 10.8 |
| Data Product Transport Service | CORE DATA | Spacecraft Services | 7.0 |
| Sun Sensor Assembly Manager | GNC | GNC | 6.5 |
| Downlink Manager | CORE DNLINK | Telecom | 14.9 |
| Downlink Partition Manager | CORE DNLINK | Telecom | 1.8 |
| Europa Clipper Magnetometer Instrument Manager | INST | Instrument | 3.7 |
| Telemetry - Engr Housekeeping, Accountability | CORE DNLINK | Spacecraft Services | 12.0 |
| ECE IO Card Driver | CORE PLATFORM | Platform Services | 5.5 |
| Discretes Manager (EIO & EMEM Card) | CORE PLATFORM | Platform Services | 2.8 |
| Europa Imaging System Narrow Angle Camera Instrument Manager | INST | Instrument | 2.4 |
| Europa Imaging System Wide Angle Camera Instrument Manager | INST | Instrument | 2.4 |
| EMEM Card Driver | CORE DATA | Platform Services | 4.1 |
| Ephemeris Management Service | GNC | GNC | 3.8 |

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| Europa Thermal Emission Imaging System | INST | Instrument | 4.3 |
| Telemetry - Event Reports | CORE DNLINK | Spacecraft Services | 23.7 |
| Filesystem Services | CORE DATA | Software Infrastructure | 11.8 |
| Fault Protection Monitor Service | CORE PLATFORM | Spacecraft Services | 4.5 |
| File Verification Service | CORE DATA | Software Infrastructure | 6.3 |
| GNC Algorithm Integration | GNC | GNC | 6.0 |
| GNC Partition Manager | GNC | GNC | 1.5 |
| Health Monitoring and Reporting | CORE PLATFORM | Software Infrastructure | 11.1 |
| Hierarchical State Machine Services | CORE PLATFORM | Software Infrastructure | 3.0 |
| SSIRU Inertial Measurement Unit Driver | GNC | GNC | 5.0 |
| SSIRU Inertial Measurement Unit Manager | GNC | GNC | 16.4 |
| Instrument Partition Manager | INST | Spacecraft Services | 3.9 |
| IO Partition Manager | CORE IO |  | 2.1 |
| Inter- and Intra-Component Messaging Facility | CORE PLATFORM | Software Infrastructure | 18.0 |
| JOI Behavior | SYSTEM | Modes | 6.0 |
| Load and Patch Service | CORE PLATFORM | Software Infrastructure | 8.4 |
| Launch Behavior | SYSTEM | Modes | 5.8 |
| MAss SPectrometer for Planetary Exploration | INST | Instrument | 5.1 |
| Motion Behavior Management Executive | System | GNC | 9.1 |
| Mission Clock Manager | CORE IO | Platform Services | 4.5 |
| Shared Memory Service | CORE PLATFORM | Platform Services | 13.4 |
| Mapping Imaging Spectrometer for Europa | INST | Instrument | 4.7 |
| NAND Memory Manager and Driver | CORE DATA | Platform Services | 10.8 |
| Non-Volatile Data Storage Service | CORE DATA | Spacecraft Services | 10.6 |
| Non-Volatile File System Service | CORE DATA | Spacecraft Services | 6.4 |
| Operating System Interfaces | CORE PLATFORM | Software Infrastructure | 2.5 |
| Parameter Management Service | CORE DATA | Spacecraft Services | 18.5 |
| Plasma Instrument for Magnetic Sounding Lower Instrument Manager | INST | Instrument | 1.9 |
| Plasma Instrument for Magnetic Sounding Upper Instrument Manager | INST | Instrument | 1.9 |
| Core Manager | CORE PLATFORM | Software Infrastructure | 29.9 |
| Propulsion Module Electronics Manager | GNC | GNC | 35.3 |
| REU PPROM | CORE BOOT | REU | 2.0 |
| Power Board Control/Power Switch Slice Driver | PWR | Engineering | 3.5 |
| Power System Manager | PWR | Engineering | 16.7 |
| Power Partition Manager | PWR | Engineering | 1.9 |
| Radiation Monitor | INST | Instrument | 0.0 |
| RAM Filesystem Service | CORE DATA | Platform Services | 5.0 |
| Radio Manager | TELECOM | Telecom | 11.2 |
| Radar for Europa Assessment and Sounding | INST | Instrument | 4.0 |
| Non-Volatile Records Service | CORE DATA | Spacecraft Services | 8.1 |
| Remote Engineering Unit Manager | CORE IO | REU | 29.3 |

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| Remote Engineering Unit Client Interface | CORE IO | REU | 4.4 |
| Redundancy Management Controller and Service | SYSTEM | Spacecraft Services | 3.9 |
| Remote Terminal Manager | CORE IO | Platform Services | 8.3 |
| RT 1553 Interface for clients | CORE IO | Platform Services | 2.6 |
| Reaction Wheel Assembly Manager | GNC | GNC | 2.8 |
| String Arbitration Service | CORE PLATFORM | Spacecraft Services | 1.6 |
| State Buffer Store | CORE PLATFORM | Spacecraft Services | 17.5 |
| System Configuration Service | SYSTEM | Modes | 3.1 |
| Multi-mission Sequencing Engine | CORE UPLINK | Spacecraft Services | 16.8 |
| System Fault Protection Executive | SYSTEM | Fault Management | 16.5 |
| Shell Configuration Service | CORE SHELL | Spacecraft Services | 0.0 |
| Shell Controller | CORE SHELL | Spacecraft Services | 4.3 |
| Shell Partition Manager | CORE SHELL | Spacecraft Services | 1.3 |
| Shell Client Support Service | CORE SHELL | Spacecraft Services | 8.0 |
| System Modes Management Executive | SYSTEM | Modes | 5.3 |
| Shared Records Service | CORE IO | REU | 3.7 |
| Stellar Reference Unit (Star Tracker) Manager | GNC | GNC | 16.3 |
| Surface Dust Mass Analyzer | INST | Instrument | 3.7 |
| Startup ROM | CORE BOOT | Software Infrastructure | 9.1 |
| System Partition Manager | SYSTEM | Fault Management | 1.0 |
| Telecom Partition Manager | TELECOM | Telecom | 0.5 |
| Thermal Manager | THERMAL | Engineering | 14.8 |
| Thermal Partition Manager | THERMAL | Engineering | 0.0 |
| Timekeeping | CORE PLATFORM | Software Infrastructure | 14.7 |
| Public Types Service | CORE PLATFORM | Software Infrastructure | 1.0 |
| Uplink Manager | CORE UPLINK | Telecom | 9.4 |
| Uplink Partition Manager | CORE UPLINK | Spacecraft Services | 1.9 |
| Utility Services | CORE PLATFORM | Software Infrastructure | 1.3 |
| Ultraviolet Spectrometer | INST | Instrument | 4.4 |