

Nucleus MMU

Embedded Memory Protection

Description:

The support for memory protection is quickly becoming a strong differentiator in embedded applications. The changing embedded market is demanding more functionality for memory protection. Nucleus MMU is an extension to the proven Nucleus PLUS kernel that allows you to protect your application from unexpected events. By grouping operating system objects into a single protection unit, called a module, your application is protected from unauthorized reads and writes.

Nucleus MMU uses the MMU to provide hardware protection in your system, by utilizing the supervisor/user mode mechanisms. Cache control is also made available through this product. Nucleus MMU allows you to group related application objects together and protect them as one unit. You can group a set of tasks together with other kernel objects like queues, semaphores, memory pools, and pipes. By allowing you to protect a group of related objects, Nucleus MMU allows you to isolate and protect the objects within the system. The protection can be critical during development in order to prevent unintentional interaction between tasks. During the deployment of the products, the protection allows you another level of confidence that your product will remain stable and robust in the field.

Nucleus MMU is suitable for all stages of the product lifecycle, from development, deployment, upgrading, and maintenance. In product development or final product deployment, Nucleus MMU can be used to minimize delays and can increase the time to discover bugs. By grouping tasks into a protected module, an embedded developer can decrease the amount of time spent debugging problems caused by uninitialized data, errant pointers, and memory corruption. The product is also suitable for deployment and in a production-level end product, since it provides added stability to the final product by ensuring that any interaction issues that weren't caught during development are handled.

Nucleus MMU is a fully integrated into the entire Nucleus product line, enabling you to take advantage of its capabilities regardless of your application. The features of Nucleus MMU can be used with the networking, graphics, and file system capabilities offered by Mentor Graphics. Nucleus MMU helps to reduce time to market by decreasing development time spent chasing down troublesome errors. Nucleus MMU is also suitable in the deployed product to provide protection in the integration of third party software and down line customer applications. As with all of ATI products, Nucleus MMU is available as a source code, no royalty solution.

Features:

- Provides protection of your application
- Integrated into entire Nucleus product line
- Can define multiple permissions and access rights
- Support Supervisor and User modes of processor
- Full control over caching features
- Useful in multiple areas of development: design, implementation, maintenance

Nucleus PLUS
Task

Nucleus PLUS
Task

Nucleus PLUS
Task

Nucleus PLUS Kernel

Contact

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