

Advantages of Sphere SP/MP and μ nOS

General

- **Targeted** on modern processors
makes full use of the possibilities of modern 32-bit processors
- **Hard Realtime** for *all* system calls
especially including realtime for dynamic memory management and thread creation/deletion
- **Scalability** without any architectural limits caused by Sphere
practical limits only set by the used hardware, unlimited use also for 64-bit systems possible
- **Small Size** of all modular levels
 - **SP:** kernel: **19,5 KB** (BIN) / kernel & application: **26,5 KB** (BIN), **112 KB** (RAM)
 - **MP:** kernel, process manager and application: **~1,2 MB** (RAM)
 - **μ nOS:** kernel, process manager, GUI and app.: **~3 MB** (RAM) – configuration-dependent
- **Portability** by hardware abstraction
the system can be ported to virtually any modern 32-bit- or 64-bit-processor
- **Modular Concept** providing different levels of complexity for different areas of operation
optimal adaptation to the abilities of the target using one kernel and its advantages
- **Home-Context-ISR** for interrupt handling
easy creation of drivers and significantly reduced development and debugging expenses

Sphere SP

- **Tiny Size** as binary as well as in RAM
minimal overhead, efficient memory management and full resource control by the application
- **Ready-to-Use Drivers** available for many areas of use
VGA (graphic & text), serial, parallel, IDE etc. available, more (e.g. network) in work

Sphere MP

- **Multi-Process-Architecture** with separated address spaces
mutual protection of processes, a program crash has no impact on other processes
- **Client-Server-Architecture** realizes flexible system services
makes system services available under a common interface - as well local as in a network

μ nOS

- **Standard-System-Services (Server)** incl. drivers and libraries
standard components shorten time-to-market, modular services for optimal adaptation
- **Complete Operating System Environment** to be used as a ready-to-go OS base
an existing environment for your application with standard-drivers, -services and -programs
- **Ready-to-Use GUI Components** incl. layout manager
quick-and-easy integration of graphic components, automatic layout calculation and display