

REAL-TIME HYPERVISOR

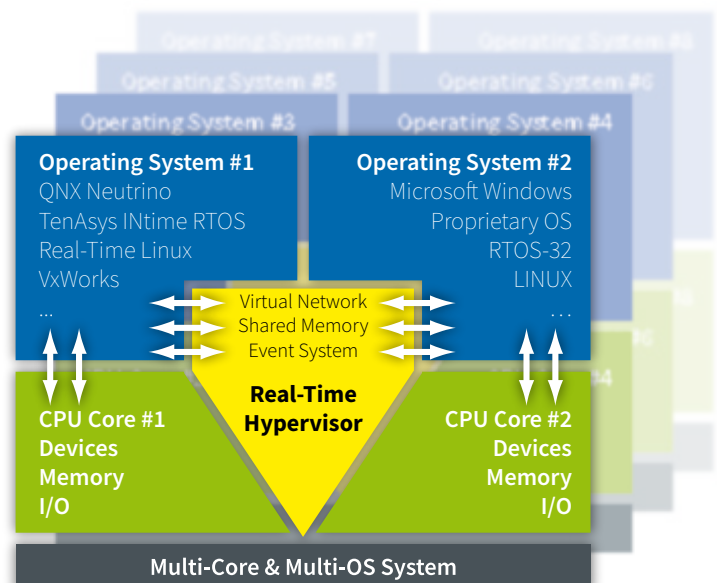


The innovative Real-Time Systems Hypervisor permits multiple operating systems – both real-time (RTOS) and general purpose operating systems (GPOS) like Microsoft™ Windows® or Linux – to run concurrently on multicore x86 processors. By utilizing this powerful and cost-effective software solution, designers attain increased flexibility in system design and remarkable enhancements to functionality and performance – at the same time reducing overall system cost.



Hard Real-Time Performance - Multiple Operating Systems in Perfect Harmony

- Combine real-time operating systems like INtime®, VxWorks®, QNX Neutrino® or Real-Time Linux, with e.g. Microsoft™ Windows®
- Operating systems reside simultaneously on an x86 computer while maintaining the hard real-time characteristics of an RTOS
- User-definable boot sequence
- Reboot any operating system anytime during undisturbed execution of other operating systems
- Communication via high performance virtual TCP/IP network and flexible shared memory



Harness the Power of Today's Multicore Processors

ADVANTAGES

- Reduced system costs and physical size through Hardware consolidation
- Hard real-time performance
- Maximum flexibility in system functionality
- Increased reliability (MTBF) as no additional hardware is required for additional operating system
- Works seamlessly with COTS and proprietary operating systems
- Runs on Any PC from Low-Power Modules to Multi-Socket Servers
- Works Out of the Box without customization
- Proven in thousands of systems worldwide

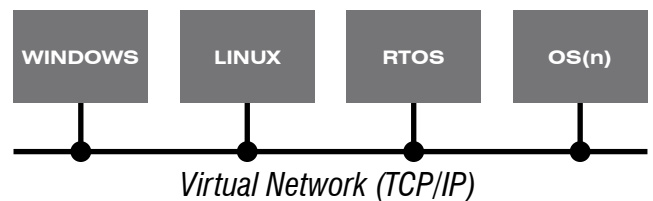
ABOUT OUR HYPERVISOR

- All operating systems safely separated and protected
- User defined startup sequence of operating systems
- Any operating system can reboot without affecting other operating systems
- Standard development tools can be used (supplied by the operating system vendors)
- Existing OS device drivers can be used without modification
- Commercial Fieldbus, EtherCat, TSN, etc. can be integrated seamlessly
- NUMA (Non-Uniform Memory Access) fully supported
- Disk Drive and Partition Assignment (AHCI Controller Sharing), NVMe Drive Storage
- USB Port Assignment (xHCI Controller Sharing)
- Cache Allocation Technology (CAT) for shared L2 and L3 Caches

OPERATING SYSTEMS SUPPORTED

- Microsoft Windows
- Windows Embedded Compact
- Wind River VxWorks
- QNX Neutrino RTOS
- TenAsys INtime Distributed RTOS
- On Time RTOS-32
- Linux
 - RT Preempt
 - Xenomai
 - Server / Desktop
- T-Kernel
- Proprietary OS upon request

MEANS OF INTERNAL COMMUNICATION



- The RTS Hypervisor provides easy communication via high performance internal virtual network (TCP/IP)
- Shared memory with an easy to use API can be configured for direct data exchange
- Time Synchronization between Operating Systems
- High-Performance Event System
- APIs to monitor, start and stop Guest Operating Systems
- Rights Management for all APIs and Shared Memories



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