

## SeaWind® X Window System Solutions SeaWind X Window System with OpenGL® Solutions

**Compatible Wind River Operating Systems:** VxWorks

**Compatible Wind River Platforms:** Car Infotainment, Consumer Devices, Industrial Automation, Network Equipment

Seaweed Systems® SeaWind® X Window System and X Window System with OpenGL® Solutions are fully tested, well-documented, COTS X11R6 client and server implementations ready to run in embedded-system environments. Designed from the ground-up for portability, Seaweed Systems' X Window System solutions run on a wide range of hardware platforms, graphics devices, and operating-system environments. Seaweed Systems offers two X Window System solutions:

- SeaWind X Window System Solutions are for customers needing 2D-animated displays or the windowing capabilities of the X Window System.
- SeaWind X Window System with OpenGL Solutions are for customers needing the 3D capabilities of the OpenGL graphics environment. The OpenGL additions to the X Window System software implement the industry-standard GLX APIs.

Both solutions are fully reentrant, minimizing memory footprint and allowing multiple applications to execute concurrently. The software is built to avoid taking semaphores when the locus of control enters and exits the library, increasing performance by virtually eliminating contention for resources. The software has been extensively tested for memory leaks, and all driver memory associated with an application is automatically released when the application terminates. Both solutions are built to optimize graphics performance using vendor-specific capabilities of supported graphics devices.

Understanding that performance is critical for most embedded systems, Seaweed Systems OpenGL with X Window System Solution supports direct mode, where the OpenGL library directly invokes the rendering software in the server rather than generating X Window System API calls. Direct mode helps to reduce both system and X Window System overhead, streamlining graphics performance.

One of the beauties of the X Window System is that clients and servers can be located on the same embedded system, and they can be separated with clients accessing the server through network connections. This is particularly useful for developers writing and testing client

software on in their workstation environments. SeaWind X Window System clients can operate in workstation environments and can help simplify the transition from the development to the target environments.

### FEATURES & BENEFITS

- ◆ High-performance, small-footprint X Window System and GLX implementation for embedded systems
- ◆ Designed for multi-application environments, with features to release memory held for terminated applications, reducing the risk of out-of-memory errors
- ◆ X Window System clients available for both embedded and workstation environments, easing the transition from development and test to the target system
- ◆ Designed for maximum portability, and is available for a wide range of processor architectures where either NVIDIA® or 3DLabs® graphics devices are used
- ◆ Quality assured under rigorous test procedures, and time-tested in product deliveries since 1996, assuring correct and robust behavior

### TECHNICAL SPECS

- ◆ Implements standard X11R6 and Motif 2.0
- ◆ OpenGL environment implements industry-standard "OpenGL-under-X" (GLX) APIs
- ◆ Libraries are reentrant for optimum performance in multi-application environments
- ◆ Client-side libraries include X11, Xext, Xt, ICE, SM, Xaw, Xmu, Mrm, Xm, GL, and GLU.
- ◆ Interoperates with Wind River VxWorks

### AVAILABILITY

Available Today

### APPLICATION AREAS

Radar, Sonar & Signal Processing; Space; General Aerospace & Defense; Car Infotainment and Telematics; Mobile/handheld; Emerging Consumer Devices; Medical; Instrumentation

#### CONTACT INFORMATION



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