



ALT Software Inc.

MobileGT Display Drivers

About ALT Software

ALT Software provides system level hardware and software products and development services to embedded computing device manufacturers. Our strengths are in software engineering as well as electronic hardware design and prototype development, with particular expertise in 2D and 3D graphics, video, audio, as well as wired and wireless networking.



ALT's OpenGL display drivers support navigation and infotainment systems running on the freescale MPC5200 processor. These drivers offer video support as well as high quality 2D and 3D graphics.

ALT's expertise crosses many market segments including avionics, automotive / telematics, industrial controls, medical, consumer mobile devices, and more.

mobileGT Display Drivers

ALT Software's high performance OpenGL graphics drivers enable the industrial-rated low power Fujitsu Coral PA 2D/3D graphics processor in the new Freescale Media5200. For more powerful graphics rendering, ALT also offers display drivers for the high performance ATI Radeon Mobility M9 graphics controller. These drivers support both the Freescale MPC5200 and MPC5200B processors.

Demonstration versions of our Coral P/PA OpenGL drivers for MPC5200-based implementations are contained in the evaluation software CD that accompanies the Media5200. Lite5200B owners can contact ALT Software directly for a demonstration version of ALT's driver. Our driver products are compatible with a number of operating systems, and support most Freescale PowerPC processors, including the MPC5200, MPC7xxx, MPC7xx, MPC6xx, and MPC8xxx families. ALT Software also creates additional high performance 2D and 3D graphics drivers, including OpenGL ES, WindML, and DO-178B certifiable OpenGL ES-SC drivers for safety-critical environments.

RTOS Supported

- Embedded Linux
- Green Hills INTEGRITY
- Microsoft Windows
- QNX Neutrino
- Wind River VxWorks

Graphics Processors Supported

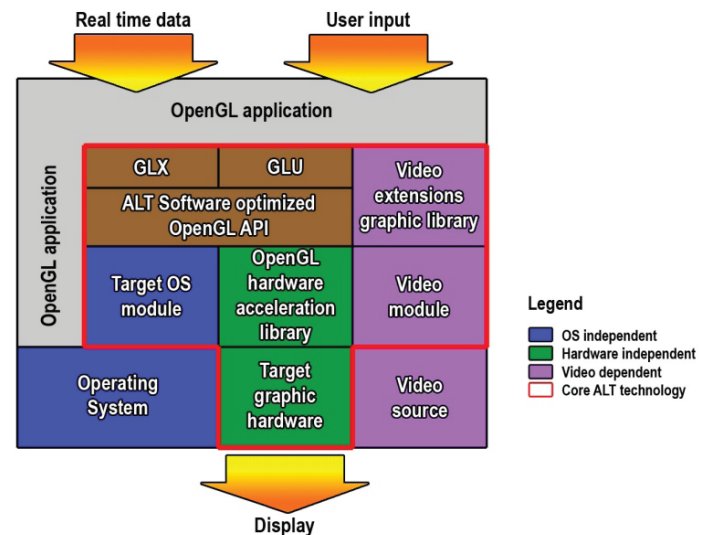
- Fujitsu Coral P and Coral PA
- ATI M9, M7 and others in ATI family
- Custom support options available

Driver Features

- High performance: exceeds the performance of many commercial OpenGL drivers by 25-50%
- Bus architectures supported: AGP, PCI, PCIe, PCI-104, PMC, monolithic
- ALT provides customization services to support alternate system configurations
- Comprehensive video features, including video capture and video overlay
- Hardware cursor support
- ALT Mini-X compact windowing API
- Client-specific custom X Server solutions available
- Memory management for limited-memory systems
- Dual display support (independent and mirrored)
- Leverages the 2D/3D graphics chip to improve the output quality of 2D rendering functions such as alpha-blending, joint-interpolation, and anti-aliasing
- 3D feature support includes lighting effects, bump mapping, all 3D primitives, fog effects, bilinear and anisotropic filtering

For more information, download a technical data sheet at:
<http://www.altsoftware.com/products/>

ALT Embedded OpenGL Driver Block Diagram



ALT's high performance display drivers are used in a variety of military and commercial aircraft.

Mini-X and X Server

Our drivers include a compact windowing API that enables a user to run an application with multiple windows or to run a single window in full screen mode. Mini-X is particularly suitable for deployment in limited-memory systems for which a full X Server implementation is impractical. ALT Software also develops custom X Server implementations to suit specific system configurations.

Memory Management for Limited-Memory Systems

Standard OpenGL assumes unlimited memory and a hard disk for virtual or paged memory support. ALT's OpenGL drivers provide optimized memory management functions that coordinate allocation between processes in limited-memory systems and systems with only physical memory.

Safety-Critical Display Drivers

ALT Software provides safety-certifiable display drivers that are compliant with the DO-178B Level A and ED-12B standards for safety-critical software in commercial aircraft. Customers can choose from the binary driver, binaries plus source code, and the complete certification artifacts required by the JAA and FAA for safety-certification. These drivers support the Green Hills INTEGRITY-178B and Wind River VxWorks AE653 safety-critical RTOS, and also run on Microsoft WindowsXP. ALT's safety-critical drivers provide both independent and mirrored dual display support. A variety of development seat and royalty-free deployment licensing options are available. ALT Software can customize the driver to support alternate configurations.

Technical Support

Our experience with many system configurations and access to our partners' product technical specifications enable us to provide our customers with expert support that is informed by an in-depth understanding of their specific engineering requirements. We understand about project deadlines and project management interdependencies, so have structured an effective and highly responsive technical support system for our customers. All our products include technical support directly from the product engineers in our Toronto and Waterloo, Ontario, Canada offices who develop our products. This service is accessible via our website, e-mail, and phone. Our Field Application Engineers are available for onsite support as well.

Custom Software and Hardware Development Services

ALT Software's development services group offers system level software development and system integration services. We develop board support packages and custom device drivers for audio, graphics, video, and networking. Our QA department also provides QA testing and industry certification (such as Freescale Enabled, or USB Certified) for embedded systems. Our years of experience meeting diverse customer requirements include many operating systems, bus architectures, graphics processors, and system configurations.

Our hardware engineering group also provides hardware design and prototyping services that can include audio, video, graphics and networking functions. Whether you require integration of a specific function into your existing design, or are looking for a complete "from design-to-prototype" solution, ALT Software can provide you with the development components you need to get your idea onto the production line.

Outsourcing to ALT Software is like having your own development team down the hall, without the overhead and with all the right people. As a matter of fact, for those customers who need it, our deployment of Field Application Engineers (FAE) to client sites means that down the hall is exactly where we can be for as long as you need it, working hand in hand with your own people. Regardless of your product or technological requirement, outsourcing to ALT Software means lower overall project costs, quality throughout every phase of the project, and faster time to market.



Freescale Semiconductor uses ALT Software display drivers to support the Fujitsu Coral PA graphics processor in the new Media5200 telematics development platform.



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