



ALT Software Inc.

Software Development Services

ALT Software is an embedded systems integrator and software development services provider whose offerings include performance optimization, device drivers, application development, and OpenGL graphics products. Our strengths are in software engineering, hardware design and prototype development, with particular expertise in graphics, audio, video, and networking. ALT's products and services are used worldwide by Tier 1 manufacturers in the automotive, avionics, defense, industrial controls, consumer, and medical device industries.

System Integration & Performance Optimization

ALT provides comprehensive design and software development services for embedded and desktop computing devices. Our expertise includes a wide range of processors, bus architectures, operating systems, I/O, networking protocols, and many other device software and hardware components. Whether you are designing and building a new device from the ground up, adding functionality to an existing product, or looking for ways to improve performance while keeping costs down, ALT's development teams have the hardware and software expertise you need to get the job done quickly and cost effectively without compromising quality.



ALT provided a complete BSP, DSP and video/audio encoding/decoding solution for a client's HDTV set-top box.

Standards Compliance & Certification

It's not enough to just have a device that works well. An equally critical step is to ensure that your device is compliant with industry recognized interoperability standards such as Universal Plug and Play (UPnP), USB, and Microsoft Windows compatibility. In industrial / medical, automotive, and aerospace / defense there are also a host of standards such as FDA [501(k)] for Class III medical devices, DO-178B for avionics, AS9100 for aerospace, and a multitude of SAE standards for automotive.

ALT Software provides software development, QA testing, and device optimization services to make your product compliant with these and other certification programs. Our services can include reviewing and optimizing your software to ensure compliance, creating all the required software and/or certification components, or undertaking the entire turnkey software development and certification process for you.



ALT Software provides DO-178B certifiable device driver products and development services to avionics manufacturers.



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System Integration & Development Services

- Board support packages (BSP)
- Device drivers (audio, video, networking, wireless, printers, and others)
- Firmware
- Application and GUI development and performance optimization
- Programming for systems with no RTOS (e.g. microcontrollers, FPGA, DSP)



ALT can speed your time to market by providing device software solutions throughout your entire product development cycle.

Audio & Video

- Digital and analog processing, encoding and decoding
- Microsoft DirectShow
- MPEG 2 & 4, MP3, AC3, AC97, H.264, SIF (BTSC and NICAM), AAC, Dolby 5.1
- NTSC, SECAM, PAL

2D & 3D Graphics

- OpenGL, OpenGL ES, OpenVG
- Microsoft DirectX, Direct3D
- Java (J2ME)

Operating System Expertise

Desktop

- Microsoft Windows XP
- Microsoft Windows Vista
- Mac OS X

Embedded

- Windows CE
- Windows XP Embedded
- Linux (Red Hat, MontaVista, Freescale, Wind River, etc.)
- Green Hills INTEGRITY
- QNX Neutrino
- Wind River VxWorks
- ATI Nucleus
- Mobile platforms including: Symbian, RIM, Palm, Windows Mobile, and others

Proprietary

- Deos™
- BAE CsLEOS
- Others...

Processors

- Freescale i.Mx, PowerPC, Power QUICC, MPC5121e
- Intel x86, XScale
- Renesas SH3, SH4, SH7770
- ARM 7, 9, 11
- Texas Instruments OMAP
- MIPS

Networking

- 802.11x, Bluetooth, ZigBee, UWB, IrDA
- Proprietary wireless protocols, including diffuse optical, narrow band, and others
- Mobile devices: GSM, GPRS, WAP, proprietary
- Microsoft Windows Network Driver Interface Specification (NDIS)
- Power line networking



Before you can write a line of code...

There are three main pre-development activities that add to the time and cost of device software development:

1. Purchasing the tools and test equipment required to do the job properly.
2. Getting the closely guarded hardware and software technical specifications you need.
3. Pulling together a software development team with the different skills required for your project.

Stay focused on your product instead.

1. ALT's two branch offices are filled with the test equipment and software development tools required for many types of development projects.
2. We have built strategic relationships with operating system and semiconductor manufacturers who provide us with the product specifications, development tools, and technical support required to develop, integrate, and optimize your hardware and software.
3. ALT employs over 100 software development experts with a range of highly specialized expertise. Regardless of the staffing of your particular project, you always have the entire ALT team behind you. We can carry out your project at our Toronto or Waterloo offices or place a team into your facilities to work side by side with your staff.