COREAVI™

Embedded *Graphics drivers*

For Avionics, Military and High Reliability Systems

CoreAVI's Embedded OpenGL Graphics Drivers

Designed from the ground up for resource constrained systems and optimized for high performance, Core Avionics & Industrial's embedded OpenGL graphics drivers are industry proven solutions that are currently deployed in dozens of civil, commercial and defense aircraft display systems worldwide. Based on a highly modular architecture, CoreAVI can optimize our customer's specific applications and quickly adapt the OpenGL drivers to new hardware platforms, operating systems and even add unique customer specific features.

Designed for Mission Critical Systems

- Primary Flight Displays (PFD)
- Mission Computer Systems
- Multi-Function Displays (MFD)
- ADS-B / Advanced Navigation Systems
- Electronic Flight Bags (EFBs)

RADEON EMBEDDED — AMD

AMD E4690 High Performance GPU

The CoreAVI Advantage

Proven Track Record: Flying today worldwide, CoreAVI's products are deployed in many military, and aerospace display systems worldwide.

Long Term Support & Supply: CoreAVI models its business approach to fulfill the 20+ year support and supply demands of its customers.

Investment in Innovation: CoreAVI invests to enable technology; lowers customer's upfront investments and reduces risk.

Quality Standards: CoreAVI adopts industry best practices; AS9100 certified. CoreAVI utilizes its in-house quality professionals and FAA Designated Engineering Representative (DER) in all facets of its development and certification processes.

Operating Systems Support

- Wind River VxWorks 5.x, 6.x, 6.6 cert, 653, Hypervisor
- Green Hills Integrity 5, 10, 11, Integrity-178B
- DDC-I Deos
- Other proprietary RTOS

Contact us

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OpenGL APIs

- OpenGL 1.x, OpenGL ES 1.x (Fixed Function Pipeline)
- OpenGL SC (Safety Critical)
- OpenGL ES 2.0 (Programmable Shaders)

Supported Features

- Scalable power and performance management
- Multiple partitioned RTOS, multiple applications
- Variable sync modes and custom resolutions
- Built-In Tests (BIT)
- Khronos EGL windows management
- Video capture library, configurable video API
- Video decoding H.264, MPEG2
- Multiple display and video output
- Multiple GPUs integrated on single target system
- Asymmetric (AMP), Symmetric (SMP), Bound (BMP)

CoreAVI's OpenGL SC, Designed for Safety Critical

Developed from the ground up following strict DO-178C Level A guidelines, CoreAVI's OpenGL SC driver is commonly used in critical airborne cockpit display systems.

Features:
- Conformance to Khronos OpenGL SC 1x Specification
- Static Memory Management
- Run-Time Built in Test (BIT API)
- Deterministic Display Lists
- Supports feature rich video capture
- 100% structural coverage (statement, DC, MC/DC) test suites

FAA DO-178C / EASA ED-12C Level A Certification Package

CoreAVI provides an FAA DO-178C and EASA ED-12C Level A certification data set that includes a complete package necessary to enable final OpenGL graphics driver certification.

Features:

Complete Planning, Software Architecture, Development and Requirements Documentation

- PSAC (Plan for Software Aspects of Certification)
- SDP (Software Development Plan)
- SVP (Software Verification Plan)
- CMP (Configuration Management Plan)
- QAP (Quality Assurance Plan)
- SCS (Software Coding Standard)
- SRS (Software Requirements Standard)
- SDS (Software Design Standard)
- SCI (Software Configuration Index)
- SAS (Software Accomplishments Summary)
- Complete Structural Coverage Analysis (Statement, Decision, MC/DC)
- Software Conformance Review
- SRD (Software Requirements Document)
- SDD (Software Design Documents)
- Traceability Matrices
- SVCP (Software Verification Cases & Procedures)
- Software Test Plan
- SVR (Software Verification Results)

FAA DO-254 Certification Package

To complement CoreAVI's DO-178C software certification package, CoreAVI also provides our customers with DO-254 hardware certification package for all supported graphics processors and system on chips. The DO-254 data set offers component level certification evidence to support avionics manufacturers with their system level certification.

www.coreavi.com