



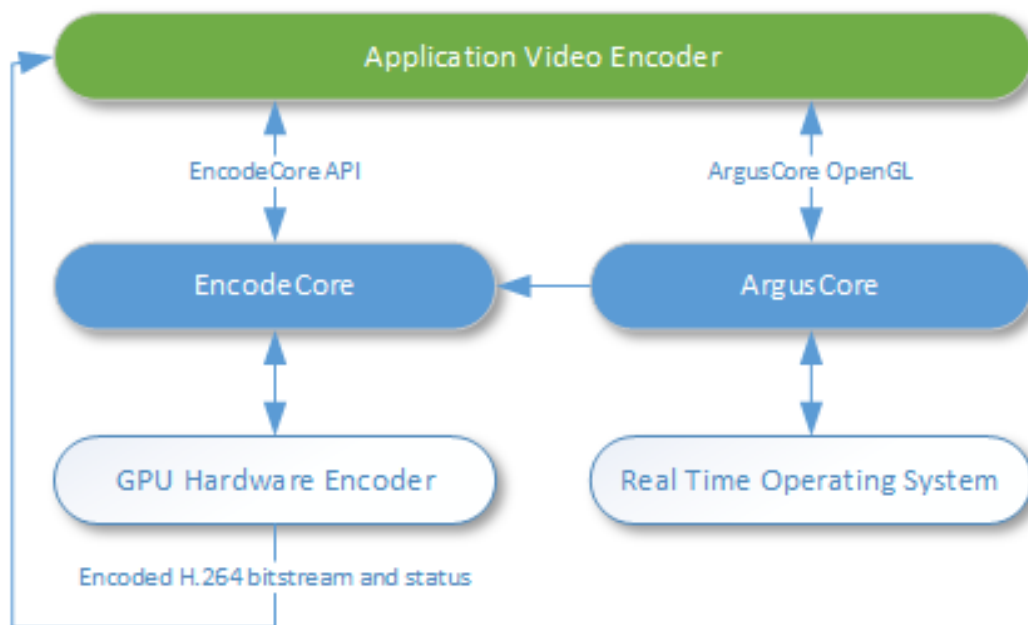
## EncodeCore™

### Video Encode Drivers for RTOS and Safety Critical Systems

CoreAVI's **EncodeCore™** is a real time and safety critical H.264 video encode driver that enables the hardware video encoder that is built-in modern graphics and system on chip processors. This driver allows applications to encode raw video images with much lower CPU usage and power consumption than would be possible with a software-only encoder. CoreAVI's video encode drivers are deployed in airborne display systems to encode the graphics/video output enabling applications requiring recoding, low bandwidth transmission and other capabilities were compressed video is required.

The video encode driver operates with CoreAVI's **ArgusCore™ ES/SC2** (CoreAVI's family of OpenGL graphics libraries) graphics drivers. The driver architecture and API ensures high efficiency and low latency between the graphics hardware and the video encode hardware. The resulting compressed video is made available on the host single board computer as raw H.264 data. The raw H.264 data can then be packaged by the application into a desired format that can be transmitted, recorded and played back on video players supporting the packaged format.

In addition, the video encode driver can convert video data stored on the host single board computer into raw H.264 data.



## Features & Benefits

- Fully thread safe implementation
- Low power and high performance hardware-accelerated video encode of H.264 video streams
- Fully integrated with CoreAVI's **ArgusCore** (OpenGL) graphics drivers for minimum latency and overhead
- Supports multiple independent (16+ streams) simultaneous video encode files and/or streams simultaneously
- Video frame encoding occurs in GPU with result placed in host single board computer memory with low CPU utilization
- Can encode GPU graphics output (framebuffer) and video stored in single board computer memory
- Metadata support for width and height, ate control data, encoded frame type (I or P) and reference frame tracking
- Supports multicore and CoreAVI's **HyperCore™** (hypervisor GPU manager) virtualized system configurations
- Supports RTOS, including Wind River VxWorks, SYSGO PikeOS, Green Hills Integrity, DDCI-Deos, Lynx Software LynxOS, Linux and configurable for proprietary RTOS
- Operates in conjunction with **DecodeCore™** (CoreAVI's Video Decode driver suite)
- Available with **CertCore178™** (DO-178C / ED12-C Avionics) Level A safety certification packages
- Available with **CertCore26262™** (ISO 26262 ASIL D Automotive) safety certification packages
- Available with **CertCore50128™** (CENELEC EN-50128 SIL 4 Railway) safety certification packages

Developed with real time and safety critical capabilities, the product suite enables maximum performance to take full advantage of the advanced capabilities of integrated video encode accelerators on popular GPUs and SoCs, including AMD's Video Coding Engine (VCE).