



Quantum3D Press Contact

Barbara Stewart
+1 (480) 488-6909 barbara@patterson.com

Quantum3D Sales Contact

Leslee Schneider
+1 (408) 361-9817, salesinfo@quantum3d.com

Quantum3D Introduces First Obsolescence-Proof GPU in a PCI Express Mezzanine Card (XMC)

Sentiris AV1 Features Safety-Critical, Flight-Certifiable Graphics Processing Unit

SAN JOSE, CA—September 22, 2008—Quantum3D, Inc., a leading provider of Commercial-off-the-Shelf (COTS) real-time visual computing solutions, today announced the availability of Sentiris AV1. The Sentiris AV1 PCI Express Mezzanine Card (XMC) was conceived to address the ongoing needs of high safety- and security-critical applications such as primary flight instrumentation and [multi-level security](#) (MLS) systems. Certifiable to DO-178B for software and DO-254 for hardware, Sentiris AV1 is the first XMC to offer an obsolescence-proof design. This is accomplished by leveraging a [field programmable gate array](#) (FPGA)-based video- and graphics-processing core instead of the traditional approach of using dedicated [graphics processing units](#) (GPUs), which are rapidly made obsolete by [end-of-life](#) (EOL) announcements.

Sentiris AV1 was built using a groundbreaking design approach. The hardware, the core of which is Xilinx's Virtex 5 FPGA, is programmed as an embedded GPU that can be upgraded over the lifetime of the product. The company's approach is different from traditional GPUs, however, in that it has fully DO-254 certifiable firmware rather than the traditional approach of obtaining a hardware waiver based on a statistical time test. While originally designed for applications such as flight-certified image generation, Sentiris AV1 is also applicable for other uses, such as real-time imaging for medical applications.

The product's video- and graphics-processing capabilities with analog and HD-SDI video outputs enable three-dimensional graphics in cockpits and mission-critical applications in particular. Its upgradability means that, for the first time, safety-critical applications can be rapidly implemented without the fear of obsolescence as GPUs are quickly EOLed when new GPUs come to market. This is crucial for embedded applications requiring long lifecycles, robust performance, reliable operation and design flexibility to address future needs.



Sentiris AV1, the XMC from Quantum3D, is designed to be obsolescence-proof. It incorporates Xilinx's Virtex 5 FPGA, which is programmed as an embedded GPU.

—more—

Integrators can use Sentiris AV1 with any operating system or CPU environment because the driver and all other software have been written from the ground up with DO-178B practices. This is in contrast to commercial GPUs, which are typically limited to Windows, Linux and x86 architectures with no access to source code.

Alan Commike, principal high-performance computing architect for Quantum3D, said, “Full DO-178B/DO-254 certifiability and the certain availability of a GPU are among the top problems facing embedded graphics systems designers in the safety-critical arena today. With its innovative design methodology, Sentiris AV1 meets these problems head on. Safety-critical systems designers will be able to choose a design option they can be comfortable certifying and then delivering on embedded programs as long as necessary. This hasn’t been done before in the safety-critical marketplace and we’re excited about what it means for this market.”

In addition to its safety-critical DO-178B and DO-254 certifiability, Sentiris AV1 meets the shock, vibration, temperature and other requirements of [MIL-STD-810F](#), making it well suited for the harsh and demanding environmental conditions posed by military and civilian field-computing implementations. Sentiris AV1 offers 512MB of ECC-protected DDR2 memory, dual RGB and dual HD-SDI outputs and eight lanes of PCI Express. The product comes standard as a conduction-cooled XMC.

Pricing & Availability

The company is currently accepting orders for Sentiris AV1, starting at \$9,980 USD. Quantum3D currently supports Sentiris AV1 with Linux drivers. Certification package details are available upon request. Interested parties are encouraged to visit booth #2746 at AUSA 2008 or contact the company directly at salesinfo@quantum3d.com or +1 (408) 361-9817.

About Quantum3D

Quantum3D, Inc. is the leading developer and manufacturer of Commercial-off-the-Shelf (COTS), open-architecture, real-time visual computing solutions. Quantum3D combines the most advanced hardware and software systems for graphics simulation in a variety of markets and implementations—image generation; tactical computing for avionics, vehicle, and man-wearable applications; synthetic environments; graphics subsystems; and other COTS solutions. Quantum3D is a privately held company headquartered in San Jose, California. For more information about Quantum3D real-time visual computing solutions, please visit www.quantum3d.com.

###

Quantum3D, the Quantum3D logo and Sentiris are registered trademarks or registered trademarks of Quantum3D. All other trademarks are the property of their respective owners.