

**FOR IMMEDIATE RELEASE**

Agency contact:  
Rae Morrow  
Wall Street Communications  
(775) 626-7722  
[rae.morrow@wallstcom.com](mailto:rae.morrow@wallstcom.com)

Telairity contact:  
Shubha Tuljapurkar  
Telairity Semiconductor  
(408) 764-0270 x104  
[shubha@telairity.com](mailto:shubha@telairity.com)

**Telairity Semiconductor Shows First HD H.264 Encoder Solution Based on Telairity-1, Industry's First Processor Designed for HD Broadcast Video**

AMSTERDAM (IBC)—September 9, 2005—The first high-definition H.264 video encoder based on Telairity-1, a breakthrough processor architecture developed specifically for broadcast-quality HD applications, is being presented by Telairity Semiconductor at IBC2005 Stand 1.101.

At its IBC2005 exhibit, Telairity is showing H.264 HD video encoded to the new H.264 standard using its **AVClairity™** encoding software with Telairity-1™, a new microprocessor architecture targeting real-time, H.264 high-definition video encoding and other demanding video and imaging applications.

**AVClairity™** HD video encoding software supports AVC (Advanced Video Codec) level 4.0 for broadcast encoding at HD resolutions of 720p60 and 1080i60. Encoder products built using **AVClairity™** on Telairity-1 will be used to create next-generation H.264 HD broadcast video encoding systems that offer bandwidth savings of over 50% relative to MPEG-2 encoders. This capability is particularly important for bandwidth constrained broadcasters and service providers, for whom Telairity-based encoder solutions will enable increased channels of HD content and services worldwide over satellite, cable, and IP networks.

**AVClairity** encoding software and the Telairity-1 processor architecture were developed concurrently by Telairity, and uniquely provide broadcast equipment manufacturers with a complete hardware/software solution for H.264 compression in which the encoding hardware and software are guaranteed to work together. By co-engineering both the software and hardware, Telairity is able to deliver H.264 encoding solutions that deliver the highest level of video processing available in a single chip, thus lowering costs and accelerating time to market for broadcast equipment OEMs.

Specifically designed for HD video compression compliant with the H.264 standard, Telairity-1 delivers all the computational horsepower of a programmable multicore processor with five independent vector/scalar cores, a video controller, and a DRAM controller supporting a 5.3 GB/s I/O bandwidth. **AVClairity** maximizes the performance of Telairity-1 in AVC H.264 encoding applications by fully utilizing the strong capabilities of the Telairity-



1 instruction set and the immense parallelism built into a multi-pipe vector processor.

“There is strong demand for infrastructure equipment that can support high definition video for satellite, cable and over the air broadcasting, as well as for IPTV services,” said Howard Sachs, founder, president and CEO of Telairity Semiconductor. “But the ability to support real time, high definition video processing is compounded by two challenges: HD video has six times as much data as standard definition (SD) video, and the next-generation AVC (H.264) video compression standard is at least four times as computationally intensive as the MPEG-2 compression standard. Telairity-1 and **AVClairity** were designed from the ground up to meet these challenges as the H.264 encoding engines for next-generation broadcast encoders, video servers, and video edit and authoring systems.”

At a clock rate of 668.25 MHz, or nine times the 74.25-MHz 20-bit video standard, the T1P2000, first chip to be built on the Telairity-1 architecture, achieves a total sustained chip performance of 55.5 GOP (Giga operations) per second. Where a general-purpose, 600-MHz to 1-GHz DSP based real-time H.264 encoder implementation would require 18 to 32 DSPs and 6 or more FPGAs, the Telairity-1/**AVClairity** solution requires only four to eight Telairity video processors and one small FPGA to achieve equivalent bit rates and quality.

To help equipment manufacturers get to market quickly with encoders using Telairity-1 technology, Telairity provides two development platforms. The T1P2000EP Evaluation Platform provides software developers and architects a tool to evaluate the exceptional performance of the Telairity-1 architecture and develop their proprietary video software. The EP platform supports up to four TVM200 video modules and program download via an RS422 interface. The TVM200 video module includes the T1P2000 processor and 512MB of DDR2 DRAM memory. An industry-standard GNU debugger enables programmers to step through their software in an efficient and familiar development environment.

The T1P2000DP Encoder Development Platform is targeted specifically at OEMs developing encoder solutions based around Telairity’s **AVClairity** technology. The T1P2000DP includes eight T1P2000 Telairity-1 video processors and the FPGA reference code which supports programmable interconnect between the video processors and enables OEMs to add their own video pre-processing, filtering and other unique features.

Telairity further supports OEM customers with **AVCexpress™**, a custom board design and prototyping service dedicated to helping manufacturers accelerate time to market for broadcast encoders, video servers, and video edit and authoring systems.



Telairity Semiconductor is currently sampling the Telairity-1 T1P2000 video processor and is also shipping the T1P2000EP Evaluation Platform. Telairity will begin sampling its first complete hardware/software H.264 encoding solution and the T1P2000DP Development Platform in Q1, 2006.

### **About Telairity Semiconductor**

Telairity Semiconductor delivers solutions for high-definition (HD) broadcast-quality video applications. Products built on the company's Telairity-1 real-time HD video architecture deliver the industry's highest level of video processing available on a single chip and address emerging standards for video compression including H.264. Telairity supplies highly integrated, complete hardware and software solutions that enable OEMs to get to market quickly with cost effective, high reliability and high-quality encoding systems. Telairity products address a number of markets, including broadcast encoders, video servers, video edit and authoring systems, video conferencing, and security and surveillance. The company was founded in 2001 and is based in Santa Clara, California.

Telairity, Telairity-1, AVClairity, and AVCXpress are trademarks of Telairity Semiconductor, Inc.