



Mirabilis Design enables designers to accurately design Ethernet Audio Video Bridging (AVB) networks and products working with AVB to meet Quality-of-Service, reliability and power requirements.

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**Mirabilis Design announces VisualSim Ethernet Audio Video Bridging Library;  
Accelerates the design and testing of AVB-connected products and networks**

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**Sunnyvale, CA. — September 5<sup>th</sup>, 2013—** [Mirabilis Design Inc.](http://www.mirabilisdesign.com) of Sunnyvale, CA, a leading provider of system and network simulation software, today announced the availability of the Audio Video Bridging extension to its extensive networking portfolio. The Ethernet AVB library implements the IEEE 802.1AS, IEEE 802.1Qat, IEEE 802.1Qav and the IEEE 802.1BA standards. The AVB library can be used in the design of automotive application, network ICs, professional video equipment, and networks for concert halls and studios. The Ethernet AVB library is currently being used at an automotive imaging supplier.

“We have adopted VisualSim to architect our next generation network processing system”, said Mr. Sadahiro Kimura, 6<sup>th</sup> Development Department, Work Solutions Development Division, Ricoh Company, Ltd, Ebina, Japan. “VisualSim enables us to quickly construct the architecture of our next-generation products and run feasibility tests to maximize the performance, understand the reliability, and lower power consumption. We can perform all these tests prior to the development of any SystemC, Verilog or software. The addition of this new VisualSim Ethernet AVB library will accelerate the modeling and exploration of imaging products that operate in system and professional recording studios.”

This Ethernet AVB library is fully integrated with the [VisualSim automotive network](#) library and the [VisualSim hardware architecture](#) library to model, simulation and design complete systems. In addition to the Ethernet and AVB network, the system can contain other networks such as CAN and FlexRay, sensors, ECU, hardware accelerators, display units, video processors, and audio equipment.

This new Ethernet AVB library enables system designers to quickly construct models of hardware system that operate on AVB over Ethernet and network using AVB protocol. The engineers can use the library components to create traffic stimulus to emulate sensors, and network traffic patterns. Pre-built parameters values can be modified by the users to experiment with different traffic inputs, traffic shaping algorithms, reservation quantities and hardware attributes to evaluate the impact on latency and throughput.

The Ethernet AVB library consists of AVB traffic generators, talkers, listeners, stream reservation protocol, registration, traffic shaping and clock synchronization. The pre-built statistics includes latency plots for



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each stream, histograms of the latency distribution, statistics of the throughput and an extensive tracing of registration, reservation, data transfer, de-registration, and error reporting. A major invention of this library is that networks can be constructed by simply configuring spreadsheets and tables.

The Ethernet AVB library can be used as a training tool for new-comers to AVB and networking. A set of templates demonstrate the construction of complex networks, operation of the reservation protocol, and response to AVB configuration changes. Advanced users can immediately start using the library to assemble complex products.

### **Availability**

VisualSim Ethernet Audio Video Bridging Library is available now as an add-on to VisualSim Architect 13.1. The product is supported on Windows, Linux, MAC OS and all other forms of UNIX.

### **About Mirabilis Design**

Mirabilis Design is a Silicon Valley company, providing software solutions to identify and eliminate risk in the product specification; accurately predict the human and time resources required to develop the product; and improve communication between diverse engineering teams. VisualSim Architect is a system-level modeling, simulation, and analysis environment using a complete set of libraries and application templates that significantly improve model construction and analysis time. The environment enables designers to rapidly converge to a design which meets a diverse set of interdependent time- and power requirements. It is optimally used very early in the design process in parallel with (and as an aid to) the development of the product's written specification and long before an implementation (e.g., RTL, software code, or schematic) of that product can even be started.

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