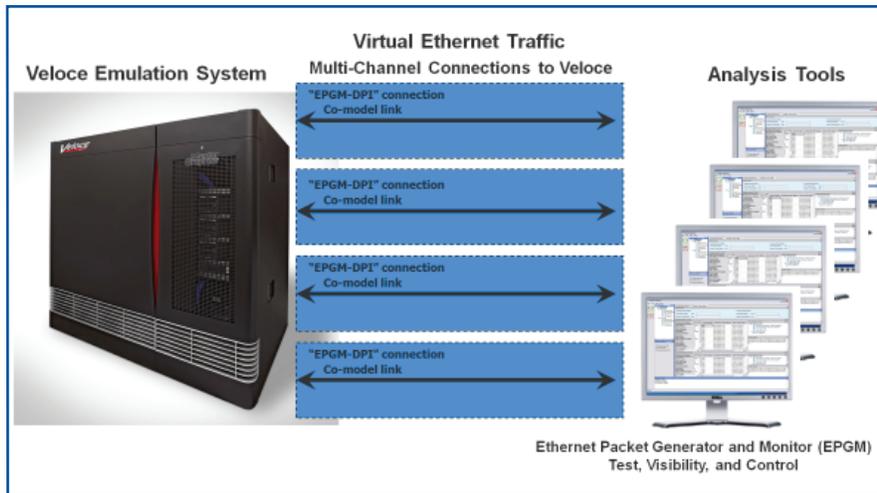


Virtual Ethernet Device



The Veloce Virtual Ethernet Device provides a scalable solution for SoC and network switch verification using the Veloce family of emulators.

A Virtual Lab for Verifying Ethernet-Based SoC Designs

The Virtual Ethernet Device delivers packet generation and analysis applications that, when connected to the Veloce® family of emulators, provide a “virtual lab” environment to verify complex, Ethernet-based System-on-Chip (SoC) designs. These include network switches, routers, LAN cards, and SoCs containing one or more Ethernet ports (for example, set top boxes and game consoles).

Through the use of Mentor’s industry-leading co-modelling technology, a connection from the Virtual Ethernet Device is made to the user’s Design-Under-Test (DUT) executing in the Veloce emulator. This allows the high-speed emulation of the customer design using virtual Ethernet traffic as a stimulus, under direct user control, significantly reducing verification times over software simulation methods. A TCL command interface is provided to the user to improve the efficiency of regression testing of the DUT with different Ethernet packet and payload types, interframe gaps and errors, thereby increasing verification productivity.

PRODUCT FEATURES

- High-performance Ethernet verification using Veloce emulators
- Virtual Ethernet traffic generators execute specific test scenarios to stress-test Ethernet designs
- No need for solution specific hardware or test equipment connected to the Veloce emulator
- Richly-featured analysis tools ease the debug of designs
- TCL command interface enables regression testing of the Ethernet design and delivers a high level of verification productivity
- Easy-to-use GUI boosts verification productivity
- Multi-Gigabit speed modes supported: 1, 10, 40, 100, and 120 Gb Ethernet
- Multiple media interface layers supported: GMII, XGMII, XLGMII, and CGMII
- Supports Raw, Jumbo, and V-LAN Ethernet frame types
- ARP, IPv4, TCP, UDP, and ICMP Ethernet frame payload data generation
- Verify multiple Ethernet ports in an SoC design

PRODUCT SPECIFICATIONS

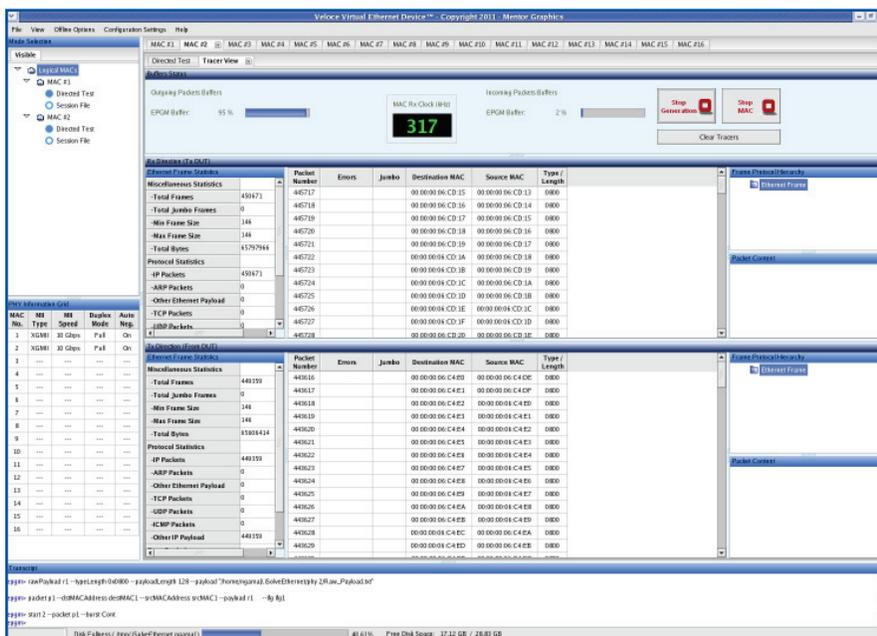
- Veloce co-model host support: Linux® RHEL4 or SuSE 10
- Platforms: Veloce family of emulators
- Up to megahertz performance in emulation

Ethernet Applications Provide Test, Visibility, and Control Capabilities

The flexible approach to verification testing enabled by the Veloce Virtual Ethernet Device allows you to choose a variety of options for generating stimulus and verifying designs. These allow you to develop very specific stimuli that “stress test” a design, such as Ethernet switches and routers, by creating a stream of customized packets of Ethernet data; including error injection, random packets, frame-header manipulation, and choice of protocol associated with a payload.

The application also includes an analysis tool, within the Ethernet Packet Generator and Monitor (EPGM), to analyze frame and packet information associated with the emulation of the DUT, significantly improving debugging of the design.

Configuration and execution of packet streaming is performed either from a GUI or from TCL-commands; the latter is especially useful for regression testing. Multi-mode support is provided so users can verify designs that contain 1, 10, 40, 100, or 120 Gbit Ethernet MACs, using corresponding PHY interfaces.



The Ethernet Packet Generator and Monitor provide debug and analysis of frame and packet activity.

Visit our website at www.mentor.com/emulation for more information.

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