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Elma's New 3U OpenVPX Reference Platform Supports FPGA Development and Ensures Interoperability Among System Boards



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Elma Electronic Inc., a leading supplier of embedded products and systems solutions built on open standards-based platforms like VME, VPX, CompactPCI and ATCA, now offers the VPX-300, an [OpenVPX reference platform](#) designed to ensure interoperability among 3U VPX boards used within high performance, compute intensive applications.

The OpenVPX backplane profile provides two separate clusters through a data and control plane switch, handling Gigabit Ethernet and PCIe links, respectively. The clusters are designated Front End, which contains a processor board and the FPGA elements, and Back End, which contains another processor board, graphics and a GPGPU (*general purpose computation on a graphics processing unit*) element.

The 3U VPX development platform is targeted at applications requiring an FPGA front end and supporting pipelined high speed processing for demanding implementations such as radar signal processing, image processing and other applications that require high bandwidth signal processing and data communications.

Elma's new fully-integrated VPX system is designed around a Virtex-6 FPGA based front end processor (FEP) card and uses a 7-slot backplane profile per VITA 65 BKP3-CEN07-15.2.3-n. The front end FPGA cluster performs incoming digital signal processing coupled via fabric to a back end data cluster.

If a standard OpenVPX backplane profile cannot support the needs of the end application, a custom target application profile (TAP) can be defined and manufactured to meet the application requirements.

The two processing segments in the architecture feature a 5-slot FPGA front end processing cluster and a 3-slot back end compute cluster. The system also features a Core2 Duo single board computer (SBC), high performance graphics card and storage module.

All of the board products used in the pre-configured VPX-300 platform have been selected and tested for interoperability.

Pricing for the fully integrated VPX-300 depends on the complement of boards and configuration.

For more information, please visit [Elma's Embedded Computing Products](#) site, contact sales at sales@elmasystems.com, or call (510) 656-3400.