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## Commex Technologies Announces First Virtualized Content-Aware HTX-Based 10 GbE NIC

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*Now Available on HP ProLiant DL785 G5 Server*

**Tel Aviv, Israel – Sept. 9, 2009** — [Commex Technologies Ltd](#) today introduced the industry's first virtualized HTX-based 10GbE network interface card (NIC), the [Vulcan SPV HT6210](#) Content Aware Virtualization NIC, which is now available on the [HP ProLiant DL785 G5](#) server. This dual-channel, HTX-based 10GbE NIC brings significant system performance improvements by allowing more virtual machines (VMs) to work on the same physical network infrastructure.

"Commex content-aware virtualization technology enables more secure, scalable performance on virtualized multicore x86 systems in today's datacenters," said Erez Schwartz, CEO at Commex Technologies. "Because content-aware virtualization allows this NIC to intelligently improve the efficiency of servers, it's an ideal and creative solution in today's economic environment where everyone wants better cost/performance ratios and ROI."

### **Virtualization**

Virtualization is one of the fastest growing developments in today's datacenter. Along with the benefits of server consolidation, more dynamic use of physical resources, and facilitated bring-up of new applications, virtualization also brings new challenges to servers in the datacenter including the need for:

- Port-scalable, high bandwidth (e.g., 10GbE) network interface
- Multicore scalable performance accommodating multiple workloads
- Support for new security scenarios – e.g., virtual security appliances

Commex Content Aware Virtualization (CAV) technology addresses the above issues enabling a highly scalable, more secure virtualized NIC solution. Customers utilizing the Vulcan SPV HT6210 10GbE with Commex CAV can enjoy a more secure server environment with scalable performance leading to reduced TCO in the Data Center.

### **Features/Benefits**

Commex **Content Aware Virtualization (CAV)** technology delivers the ability to classify incoming network traffic based on its content and send it to the correct destination (e.g., virtual machine). Classification includes L7 protocol and application format identification as well as a pattern match engine that identifies text patterns in the packet header and payload.

Commex *CAV* brings the following features into the virtualization world:

**VPorts:** Commex *VPorts* technology enables Commex NICs to present a single physical port as multiple virtual ports (network interfaces). These ports are perceived by the Hypervisor as multiple NICs allowing efficient network interface sharing. For example, each VM can have its own dedicated network interface. Additionally, *VPorts* provides a **security benefit** by allowing for finer separation of data flows for different applications previously running on separate servers, now co-residing.

**MAC Classification Hardware Assist:** In a virtualized environment, in order to be able to share a NIC amongst multiple VMs, MAC switching is needed for sending a packet to its proper destination according to its MAC address. MAC switching consumes significant CPU resources thus limiting the system's overall performance and inhibiting scalability. MAC classification is an integral part of MAC switching. Commex uses an internal Content Addressable Memory (CAM) that classifies incoming MAC addresses and directs data packets to a designated interface of a guest O/S according to a "self learning" mechanism. The classification needed for MAC switching is done in hardware, thus offloading the host CPUs and improving performance scalability.

**Selective Security Flow:** With the fast uptake of virtualization, security appliance vendors are now offering “virtual security appliances” which run on a virtualized server (as opposed to a separate H/W appliance). To support this new scenario, there’s a need to classify packets and decide which one of them should be sent to the security front-end. Commex content awareness can be leveraged to inspect packets and identify those that should be filtered through the security front-end.

**Secure MAC Filtering:** Currently, NICs in virtualized environments typically run in promiscuous mode. This mode of operation enables non-designated network traffic packets to reach the operating system imposing a potential security threat. Commex Secure MAC Filtering enables the server to deflect any data packets with unknown MAC address, data that could be malicious in nature.

The Vulcan SPV HT6210 Virtualization dual-channel 10GbE NIC uses AMD Direct Connect Architecture by connecting directly to a multicore AMD Opteron™ processor via a 16-lane HyperTransport™ interface (for more information, see [www.hypertransport.org](http://www.hypertransport.org)). The result is true multicore scalability of network traffic performance.

“The Commex Vulcan SPV HT6210 Virtualization NIC special features combined with the HTX connectivity for lower latency and higher performance bring extra value to customers,” said Mario Cavalli, General Manager of the HyperTransport Consortium. “Commex has succeeded in leveraging the key strengths of HyperTransport technology for virtualized environments.”

### **Pricing/Availability**

Commex Vulcan SPV HT6210 Content Aware Virtualization NIC is currently available for evaluation on HP ProLiant DL785 G5 server in an HTX form factor. Commex Vulcan PCV G1210 NIC will be available for evaluation in a PCIe form factor in Q4 of this year. For further details, please contact [sales@commextech.com](mailto:sales@commextech.com).

### **About Commex Technologies**

Commex Technologies Ltd. is a fabless chip company dedicated to providing intelligent, high-performance solutions for x86 multicore systems. Commex develops and sells in-server content-aware solutions, including the Vulcan family of 10GbE smart Network Interface Cards (NICs), powered by the Commex Thunder™ network

controller. The company's innovative patent-pending technology leverages on-chip classification and action engines, to deliver multicore-scalable performance to server OEMs and system designers. For more information, visit the company online at [www.commextech.com](http://www.commextech.com).

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