

Innovative Pleora Software Lowers Cost, Improves Performance and Scalability of Processing-Intensive Vision Applications

- iPORT™ Hydra™ software first to deliver full-duplex, real-time data streaming between GigE (Gigabit Ethernet)-connected PCs with off-the-shelf hardware

OTTAWA, CANADA, October 12, 2004: Pleora Technologies today announced the commercial release of ground-breaking new software for real-time data streaming between GigE-connected PCs. Pleora's iPORT Hydra PC communications software allows companies to cut the cost – while vastly improving the flexibility, scalability, and ease-of-use – of processing-intensive vision applications such as semiconductor wafer inspection, flat panel display inspection, and postal sorting.

Today, the real-time processing requirements of applications like these are typically met using DSP (digital signal processing) boards, framegrabbers, and other types of specialized PC hardware. These solutions are expensive, and difficult to evolve or scale when processing loads change, new tasks are introduced, or different system architectures are required.

Pleora's iPORT Hydra software eliminates or reduces the need for this costly hardware by enabling full-duplex (two-way), real-time GigE connections between standard PCs. With Hydra, processing power can be increased and new tasks accommodated simply by adding a PC to the system or upgrading an existing one. The PCs can be connected directly or via a GigE switch to support a variety of system architectures.

“iPORT Hydra allows vision systems with demanding processing requirements to benefit for the first time from the continually improving cost/performance curve of standard PCs,” said George Chamberlain, President, Pleora Technologies. “At the same time, Hydra allows these systems to leverage GigE's well-known scalability, flexibility, and ease of use.”



High-speed, full-duplex PC communications

iPORT Hydra software runs on any PC equipped with a GigE network interface chip from Intel's 8254x series. On the transmit side, Hydra takes raw data in any format from the main memory buffer in the host PC, converts it to IP, and sends it at 1 Gb/s over Cat-5 (Category 5) copper or fiber to the destination PC. On the receive side, Hydra streams the data directly into the main memory buffer. In both operations, the Windows IP stack is bypassed, minimizing CPU usage. This leaves the CPU free to process applications and reduces microprocessor idle cycles.

"Essentially, iPORT Hydra offers the functionality and performance of a costly TCP/IP offload card in a cost-effective, highly reliable software implementation," said Alain Rivard, Vice President, Engineering, Pleora Technologies.

End-to-end solution

Pleora's iPORT Hydra software integrates seamlessly with other products in the company's iPORT™ Vision Connectivity Solution. These products include: a growing family of iPORT IP Engines, which efficiently convert imaging data to IP for real-time, low-latency transport over GigE; the iPORT™ IP Device Driver, PC software that transfers data to memory using almost no CPU cycles; and the iPORT™ Software Development Kit (SDK), which lets users easily develop applications based on custom code or third-party software packages.

About Pleora

Pleora Technologies is the world's leading supplier of Gigabit Ethernet (GigE) connectivity solutions for vision systems. Pleora's iPORT™ products stream imaging data over low-cost GigE connections with very high performance, while at the same time giving vision systems long-distance reach, scalable processing, flexible networking, and unmatched ease of use. Pleora is headquartered in Ottawa, Canada.

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