Aquantia Announces Sampling of Industry-Leading Low-Power 10GBASE-T PHY

Adoption of 10GE will accelerate as servers and switches exploit the advantages of 10GBASE-T

MILPITAS, Calif., November 17, 2008 -- Aquantia, the leading developer of first-to-volume mainstream 10GBASE-T solutions, announced today it has begun sampling of its multi-rate 10GBASE-T PHY transceiver. The AQ1002 is a monolithic, low-power, full-reach 10G/1G/100M PHY, which brings the benefits of twisted pair cabling and autonegotiation to 10GE networking.

The AQ1002's low power of 5.5W over 100m of Cat6a cable will accelerate adoption of 10GBASE-T as it enables dual port network adapters (NIC/HBA/CNA) and high-density switches with the ubiquitous RJ45 connector. The RJ45 and twisted pair cabling are enablers for 10GE for many reasons, including:

- **Multi-rate capability.** With the coexistence of GE and 10GE, the network connection is benign and simple to manage. Multi-rate PHYs simplify add-moves-drops, lowering operating expenses.
- **Autonegotiation.** This is a critical factor as IT managers consider deployment cost and complexity. IT managers know that by specifying RJ45s and twisted pair cabling, the installer will always establish the fastest possible link by simply making the connection.
- **LAN-on-Motherboard.** Today servers have two RJ45s supporting 1000BASE-T. This means a connection at GE to the server is "free". It is expected that LOM with 10GBASE-T will become a reality in the not-too-distant future.
- **Flexible Switch Topologies.** UTP supports both Top-of-Rack and End-of-Row applications with the same RJ45.
- **Cost.** Twisted pair cabling delivers the lowest capital cost for many reasons. Because cabling is delivered in bulk, material costs are lower and the cable is always terminated at the correct length.

The AQ1002 performs at an even lower power of 4.5W for the IEEE Short Reach Mode of 10GBASE-T. Short-Reach distances of 30 meters satisfy requirements for modular End-of-Row switches. Top-of-Rack switches will also exploit Short-Reach power while reaping the additional benefits of 10GBASE-T.

Wake-on-LAN (WoL) is another critical attribute of the AQ1002, which implements a feature associated with Ethernet over twisted-pair. This energy savings or "green" feature permits servers to enter a sleep state when not in use, and to be "woken-up" by the network when required to come back on line. The AQ1002 contains all the circuitry to monitor for the "magic packet" and wake the server from the network. Since these functions are performed wholly within the AQ1002, the rest of the adapter can be powered down. Link speed will typically be reduced to 100BASE-TX for the server to meet power requirements within the sleep state.

"IT Data Center and distributed network managers need universal and scalable high-speed copper connectivity, to match the growing dominance of 10 GE servers and switches in their networks," stated Aquantia president and CEO Phil Delansay. "Since 10GBASE-T is now the endorsed, mainstream interconnect standard of top-tier server vendors, we are approaching a tipping point in the industry. The combination of features, low power consumption, product density and low cost is now going to start driving volume usage of 10GBASE-T PHYs like the multi-rate AQ1002. There is clearly pent-up demand for the capabilities of our new PHY, and we are pleased to offer availability with this product's proven strengths."

"10 GE sales are clearly ramping in the server and switch markets," stated Aileen Arcilla, IDC Senior Analyst for Semiconductors: Networking, Broadband, and Storage Systems. "Astute network managers will be making longer-term plans for their dominant interconnects in end-of-row and top-of-rack applications within the datacenter, and 10GBASE-T is expected to be much more prominent in these plans. Those who are ready to offer a high density, low power 10GBASE-T solution will be able to capitalize on this opportunity and finally encourage widespread market adoption of this interface."

The AQ1002 supports a rich feature set, and is in a compact 21mm BGA package. The device is available today in sample form, and will be released to production in January 2009. Evaluation kits are available.

About Aquantia
With its 10GBASE-T silicon products for mainstream high-speed connectivity, Aquantia meets business needs for efficiency, lower total cost of capital, productivity and easy-to-use network infrastructure. The company's versatile technology platform is based on advanced signal processing, while fully leveraging the maturity of Ethernet and offering the universal appeal of the RJ45. Aquantia ICs connect multi-core data centers, applications-optimized workgroup computing and virtual server networks with one flexible low-cost and standards based architecture. Aquantia is a venture-backed private company with strong financial backing from Lightspeed Venture Partners, Greylock Partners, VentureTech Alliance, and Pinnacle Ventures. For more information, visit www.aquantia.com.

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