

Revolutionizing Ethernet Performance

NetEffect Company Overview

NetEffect Inc. is driving the next generation of Ethernet throughout the data center. First to deliver all of the performance benefits of a full implementation of the IETF-approved iWARP extensions to TCP/IP, NetEffect accelerated Ethernet adapters meet the rigorous data center demands of high throughput for networking, fast access for storage and low latency for scale-out and clustering. NetEffect solutions simplify data center management and infrastructure complexity by enabling a common networking technology for data networking, storage and scale-out applications. NetEffect 10Gb and 1Gb accelerated Ethernet adapters are complete hardware and software solutions that achieve the highest performance and lowest power consumption in the industry, full compatibility with legacy Ethernet infrastructures and flexible, more efficient resource utilization.



Market overview and challenges

Information technology managers struggle with three challenges in the data center:

- > accessing ever increasing amounts of data quickly and efficiently,
- > processing data rapidly and cost effectively, and
- > distributing information to other users and computers.

As the amount of data to be shared by many users increases, the migration to networked data storage accelerates. Until now, improved access for networked data storage has been accomplished through increasing the speed of communication media. The media is no longer the bottleneck; the overhead of moving data onto and off of the media is now the predominant bottleneck.

In similar fashion, data center managers have been seeking ways to improve their ability to process the data. In the quest for more compute cycles, large, expensive multiprocessing systems are giving ground to clusters of less expensive processors. Until recently, clustering these processors could only be effectively accomplished using expensive proprietary equipment. This defeated the purpose of us-

ing inexpensive processors, undermining the ability of clustered systems to become a mainstream practice. But as processors become increasingly less expensive and more powerful, the desire to make clustering practical and effective grows. The standardization and proliferation of clustering has become a priority for vendors on all fronts – computers, operating systems and applications.

Finally, the demand for data by users and applications alike has become insatiable. 1 GbE connections have become pervasive on servers workstations, desktops even notebooks. More and more of these 1 Gb streams are aggregating at the back of servers.

InfiniBand features at Ethernet TCO

InfiniBand was conceived to pioneer the realization of progress in all these arenas. It was believed that InfiniBand could provide the performance characteristics necessary for effective processor clustering while dramatically reducing data access and networking bottlenecks. Unfortunately, use of InfiniBand required all devices in the communications path and most of the existing management software in a data center to be replaced. InfiniBand was a possible technical solution,

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but was not an acceptable economic or existing networking infrastructure-friendly one. An effective price/performance solution to this problem was needed. If the characteristics of InfiniBand could be effectively deployed to the existing Ethernet network in the data center, all of the benefits could be achieved while operating within the existing networking infrastructure. Through the work of an industry collaborative body, the RDMA Consortium, it was proven that this solution could be achieved and iWARP technology was born.

The NetEffect product advantage

NetEffect Ethernet adapters are the first to fully implement the iWARP extensions to Ethernet to address the data accessibility, processing, and distribution challenges faced by data center managers. This was possible through the application of expertise developed as one of a very few that had successfully architected, designed, manufactured and shipped production chips that process networking packets at 10 Gbps speeds while implementing RDMA. Further, NetEffect's unique modular and patented architecture allows the application of these technologies to Ethernet with considerably less risk than other implementations.

NetEffect's product family includes multiple 10GbE or 1GbE adapters capable of concurrently supporting networking, data storage, and clustering traffic. For customers, this means:

- > unparalleled performance
- > simplified data center architecture
- > flexibility to redeploy resources rapidly and more effectively
- > reduced TCO (common spares, common training, common software)

NetEffect Ethernet solutions address the key data center demands for quickly and efficiently accessing, processing and distributing

data. They offer a single building block for any topology that is completely compatible with and transparent to the existing data center infrastructure. For small businesses with a single switch network, to medium sized businesses growing into significant networked storage for many clients and servers, or the largest of enterprises with complex separate fabrics for networking, storage, and clustering, NetEffect Ethernet solutions offer immediate benefit to all data center applications.

History

NetEffect is a privately held fabless semiconductor company focused on providing next generation, high-performance, multi-gigabit Ethernet connectivity solutions for commercial data centers. Founded in December 1999 as Banderacom, the company focused on developing silicon for the emerging InfiniBand market. Banderacom successfully designed, manufactured, and shipped production quantities of their first product, the iBandit InfiniBand Channel Adapter, and sample quantities of a second product, the S16 16-channel InfiniBand switch.

By mid-2002, companies were reluctant to invest in a completely new InfiniBand infrastructure for the data center. In response, Banderacom placed its InfiniBand products on hold but continued to develop products that relieved the communications bottleneck in the data center.

The result was a new company, who focused on applying the knowledge gained in developing InfiniBand products to iWARP Ethernet. In early 2004, the company was recapitalized with a new Series A investment of \$22M and a new name – NetEffect. The new name reflected the change in focus to becoming a leader in next generation Ethernet connectivity solutions that dramatically improve the way enterprise users perceive and use network connectivity.

Target markets and applications

NetEffect's initial target market is high-performance computing such as national research laboratories and educational research institutions and clustered computing applications in vertical markets including Oil and Gas Exploration, Design/Manufacturing, Financial Services, and Bio-Sciences. Broad interest has been demonstrated by server and storage vendors for a much wider range of applications. The concurrent support of networking, storage, and clustering will result in broader adoption throughout the data center.

For more information, visit www.neteffect.com.

At a Glance

- > Headquarters in Austin, Texas
- > Venture funded
- > Approx. 60 employees

Management team

- > Rick Maule, CEO and President
- > Terry Hulett, Vice President Architecture and Silicon Engineering
- > David Sommers, Vice President Software and Systems
- > Bill Maxwell, Vice President of Sales
- > Rob Senders, Chief Financial Officer

Principal Investors

- > Austin Ventures
- > Duchossois Technology Partners
- > Granite Ventures
- > Infinity Capital
- > JatoTech Ventures
- > Texas Instruments
- > TL Ventures

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