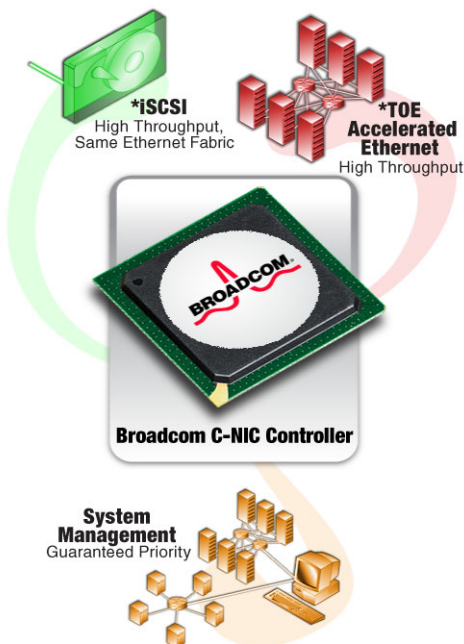




NetXtreme II

Converged Network Interface Controller

FEATURE BRIEF



Our NetXtreme II is much more than an Ethernet Controller. We think of it as a force multiplier for your network.

OVERVIEW

The NetXtreme II is a Converged Network Interface Controller (C-NIC) that can simultaneously support networking, storage, and clustering on a single chip. It can increase data throughput, reduce latency, and serve more users while freeing the host CPUs in your IT infrastructure to run the applications your business depends on. The controller has offload* capabilities for high speed data and storage networking traffic.

FEATURES AND BENEFITS

- Adaptive interrupt capability automatically adjusts the host interrupt frequency based on traffic conditions.
- Auto-negotiation of speed ensures that the highest operating speed is always selected for each link partner.

MULTIPLE OPERATING SYSTEMS SUPPORTED

- Microsoft® Windows® (32-bit and 64-bit extended)
- Linux® (32-bit and 64-bit extended)
- MS-DOS®
- Sun™ Solaris™
- SCO® UnixWare®
- SCO® OpenServer®

MULTIPLE HYPERVISORS SUPPORTED

- VMWare® ESX
- Citrix® XenSource™

NETWORK MANAGEMENT APPLICATIONS

In addition to the Broadcom device drivers, the installer installs the management applications. The following are installed when running the installer:

- Broadcom Device Drivers: Installs the Broadcom device drivers.
- Control Suite: Broadcom Advanced Control Suite 3 (BACS 3).
- BASP: Installs Broadcom Advanced Server Program.
- SNMP: Installs the Simple Network Management Protocol subagent.
- CIM Provider: Installs the Common Information Model provider.
- iSCSI Crash Dump Driver: Installs the driver needed for the iSCSI Crash Dump utility.

MULTI-BOOT AGENT

Broadcom's Multi-Boot Agent (MBA) software utility enables the computers on your network to execute the boot process using images from remote servers. MBA is released with both monolithic and split binary images to accommodate operating environments in which built-in base code may not be present on the motherboard.



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MBA is a client/server package that supports Preboot Execution Environment (PXE), Remote Program Load (RPL), and Bootstrap Protocol (BootP), and has been tested successfully in the following environments:

- Red Hat® Linux® PXE
- Intel® Apitest™
- MS-DOS® Universal Network Driver Interface (UNDI)
- Remote Installation Service (RIS)
- Windows® Deployment Service (WDS)
- Automated Deployment Service (ADS)
- iSCSI boot-capable controllers

POWERFUL CONTROL SOFTWARE

The Broadcom Advanced Control Suite 3 (BACS3) provides an unprecedented level of governance across your entire network, enabling detailed tests, analyses, and diagnostics to be performed for each network adaptor installed in your system. In addition, BACS3 includes utilities to help you configure VLANs and set up teams for link aggregation, Smart Load Balancing™ and Failover, Generic Trunking, and more.

BROADCOM ADVANCED SERVER PROGRAM

The Broadcom Advance Server Program (BASP) is the teaming software developed for Windows Server 2003 and Windows Server 2008, and runs within BACS3. BASP provides heterogeneous support for network adapter teaming, and can be used with the Intel® 10/100 and Pro1000 adapters/LOMs shipped by OEMs, as well as Broadcom's own NetXtreme LOMs and adapters.

Note: TOE teaming can be used with NetXtreme II adapters only.

BASP supports four kinds of teams on Layer 2:

- Smart Load Balancing and Failover: the Broadcom implementation of load balancing is based on IP flow. IP traffic can be balanced across multiple adapters (team members) for both inbound and outbound traffic. All of the

adapters in the team have separate MAC addresses. Automatic fault detection and dynamic failover can be provided to other team members or to a hot standby member. This is done independently of Layer 3 protocols (IP, IPX, NetBEUI); instead, it works with existing Layer 2 and Layer 3 switches. No switch configuration (such as trunk or link aggregation) is required.

- SLB (Auto-Fallback Disable): This kind of team is identical to the Smart Load Balancing and Failover team, with the following difference—when the standby member is active, if a primary member comes back on line, the team continues using the standby member, rather than switching back to the primary member.
- Link Aggregation and Generic Trunking: these operating modes increase throughput in both directions and conform to the IEEE 802.3ad (LACP) specification.

BASP also supports SLB (Auto-Fallback Disable) and Smart Load Balancing and Failover teams for TOE.

MANAGEABILITY

- Broadcom Advanced Control Suite 3 diagnostic and configuration software suite.
- Wake on LAN support.
- Universal Management Port (UMP) support
- Statistics for SNMP MIB II, Ethernet-like MIB, and Ethernet MIB (IEEE Std 802.3z, Clause 30)
- SMBus controller
- ACPI 1.1a compliant (multiple power modes)
- IPMI support

VLAN OVERVIEW

Virtual LANs (VLANs) allow you to split your physical LAN into logical parts, to create Logical segmentation of workgroups, and to enforce security policies for each logical segment. Up to 64 VLANs (63

tagged and 1 untagged) can be defined for each Broadcom adapter on your server, depending on the amount of memory available in your system. VLANs can be added to a team to allow multiple VLANs with different VLAN IDs. With multiple VLANs on an adapter, a server with a single adapter can have a logical presence on multiple IP subnets. With multiple VLANs in a team, a server can have a logical presence on multiple IP subnets and benefit from load balancing and failover. A virtual adapter is created for each VLAN added.

Broadcom adapters support multiple VLANs on a per-port or per-team basis, allowing very flexible network configurations.

ADDING VLANS TO TEAMS

Each team supports up to 64 VLANs (63 tagged and 1 untagged). Note that only Broadcom adapters and Alteon® AceNIC adapters can be part of a team with VLANs.

*Offload capabilities are an upsell on Broadcom network controller solutions. They can be enabled through license keys to provide lower CPU utilization and higher throughput with larger IOPs for enterprise solutions.

BROADCOM CORPORATION

5300 California Avenue

Irvine, California 92617

Phone: 949-926-5000

Fax: 949-926-5203

E-mail: info@broadcom.com

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