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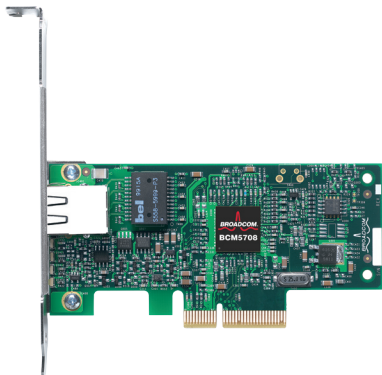Connecting
e v e r y t h i n g ®

NetXtreme II® 5708
SC Gigabit Server Adapter

REFERENCE SHEET

*NetXtreme II 5708
Single Port Copper Gigabit Server Adapter*

HIGHLIGHTS

- *Optimizes server efficiency and improves network performance*

- *TCP/IP Offload Engine (TOE) for Windows, significantly reduces CPU utilization*

- *Total Ethernet compatibility - standard TCP/IP implementation*

- *Host Bus Adapter (HBA) functionality supporting Accelerated iSCSI*

- *Auto negotiation of speed ensures highest available throughput*

- *Teaming and failover ensure smart load balancing and data availability*

OVERVIEW

The Broadcom® NetXtreme II® 5708 SC Gigabit Server Adapter is a new class of Gigabit Ethernet (GbE) adapter able to simultaneously perform accelerated networking and storage networking on standard Ethernet. The NetXtreme II is a family of Converged Network Interface Controllers (C-NIC) with superior design, they also support teaming and failover to improve network application performance and provide server redundancy.

PERFORMANCE AND RELIABILITY

Broadcom validates its network interface cards over a variety of operating systems and platforms ensuring compatibility and interoperability. This 1GbE Ethernet server adapter takes full advantage of the PCI Express® bus architecture to maximize network throughput. Heterogeneous teaming enables Smart Load Balancing™ to help increase throughput and fault tolerance when multiple adapters are configured to work together as a team to share traffic and provide data reliability with failover.

iSCSI STORAGE SUPPORT

Host Bus Adapter (HBA) functionality on the NetXtreme II 5708 SC Adapter supports Accelerated iSCSI. This converges block storage and network processing over standard TCP infrastructure, eliminating the need for a separate storage adapter and cabling while providing fibre channel comparable performance and reliability at a fraction of the cost. There is no need to maintain a separate storage infrastructure and no need for additional training.

ADVANCED TECHNOLOGY

The NetXtreme II 5708 SC Adapter features TCP/IP Offload Engine (TOE) technology for Windows which reduces the server CPU utilization and improves application performance. TOE offloads the TCP protocol processing from the server CPU onto the server adapter. This preserves valuable CPU cycles for applications processing and improves overall server performance and network efficiency. Receive Side Scaling (RSS) also enables packet receive processing to scale with the number of available processors.

MANAGING WITH CONFIDENCE

The NetXtreme II 5708 SC Adapter helps preserve your existing networking environment: operating systems, network administration tools, core cabling, personnel training, etc., while improving server efficiency and networking application performance. Major operating systems are supported, including Microsoft® Windows® and Linux, and the TOE and RSS functionality is fully integrated in the Microsoft Server 2003® Scalable Networking Pack. In addition, 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.

NetXtreme II® 5708 SC Gigabit Server Adapter
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STANDARD FEATURES

Part Number	Factory Install w/TOE: 430-2077 Factory Install w/TOE & iSCSI: 430-2964 Option Kit w/TOE: 430-2192 Option Kit w/TOE & iSCSI: 430-2965
Controller	Broadcom 5708C
Data Path	Four Lanes (x4)
Bus Architecture	PCI Express™
Form Factor	5.8 x 2.5 in
Data Rate	Auto-Negotiate 10/100/1000 Mbps
Ethernet Ports	One
Onboard Memory	92KB
Cabling	Category 5
Connector	RJ-45
Max Cable Length	100 Meters

ADVANCED FEATURES

- TCP/IP Offload Engine (TOE)
- Host Bus Adapter (HBA) functionality for iSCSI support
- Receive Side Scaling (RSS)
- TCP, IP, UDP Checksum
- TCP Segmentation
- 802.1q VLAN tagging
- IPMI management pass-through capability
- Link aggregation and Load Balancing
- Heterogeneous Teaming
- Jumbo Frames

POWERFUL CONTROL SOFTWARE

The Broadcom Advanced 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 adapter installed in your system. In addition, BACS3 includes utilities to help you configure VLANs and set up teams for link aggregation, Smart Load Balancing™, Failover and more.

OPERATING SYSTEMS AND MANAGEMENT

Standards Supported	IEEE 802.3z, 802.3x, Dynamic 802.3ad, 802.3p, 802.1Q PCI Express™ ver 1.0a, ACPI ver 2.0
Operating Systems	Microsoft® Windows® 2003 Server all editions, Red Hat Enterprise Linux® 3 and 4 for x86 and AMD64/EM64T, SUSE Linux Enterprise Server 9 for x86 and AMD64/EM64T, (No Linux support for TOE, Microsoft Server 2003® Scalable Networking Pack required for TOE), NDIS 2 for DOS
Wake On LAN	Yes
PXE 2.0 Support	Yes
Protocols	NETBUI, Collision Sense Multiple Access/Collision Avoidance, 802.2 NetBios, IPX/SPX, IPX, IP, TCP/IP

POWER CONSUMPTION

Operating Voltage	+3.3V +/-5%, Maximum 2A @3.3V (DC)
Temperature-Operating	32° to 131° F (0° to 55° C)
Temperature-Storage	-40° to 185° F (-40° to 85° C)

SUPPORT

Servers Supported	PowerEdge 1900/1950/2900/2950/2970/840/860/SC1435/R200/R300/R805/R900/R905/6950/T105/T605/T300
Limited Warranty	1-year Limited Warranty

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Dell has tested and certified the Broadcom NetXtreme II® 5708 SC Gigabit Server Adapter for use with specific Dell PowerEdge Servers. Dell specifically disclaims knowledge of the accuracy, completeness or substantiation for all statements and claims made in this document regarding the properties, capabilities, speeds or qualifications of the adapter.