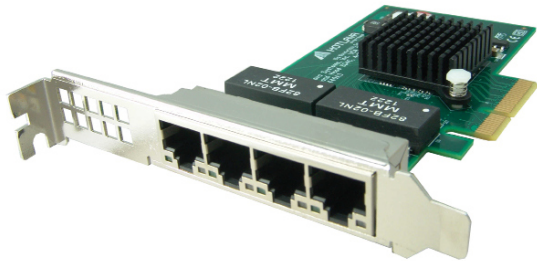
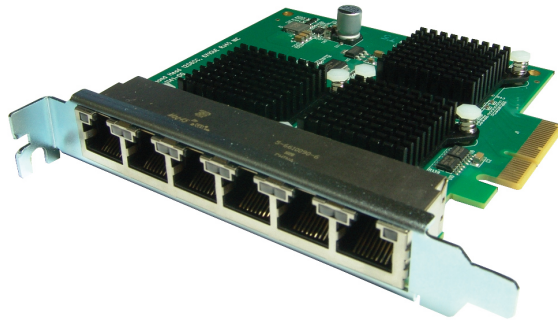


# Quad-Port and Six-Port RJ-45 Gigabit Ethernet Network Adapter

HotLava Systems' quad-port and six-port copper RJ-45 Gigabit Ethernet NIC delivers high port density and low latency network connectivity in a low-profile, space saving design.



Diamond Head 8G4C



Diamond Head 12G6CC

## Benefits

- World class Intel-based Gigabit Ethernet technology
- Flexible I/O virtualization for port partitioning and quality of service (QoS) of up to 32 virtual ports
- Scalable iSCSI performance delivering cost-effective SAN connectivity
- CAT5e+ cable up to 100 meters
- Standard Intel drivers for easy installation without disruption of existing applications
- Wire speed bidirectional GbE performance
- Requires only one low-profile, half-length PCIe slot
- Ships with both full-height and low-profile mounting brackets

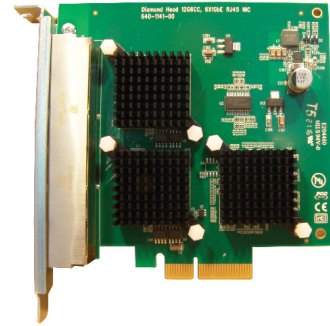
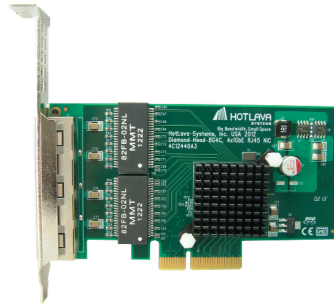
## Highlights

- Four or six RJ-45 GbE ports in one adapter
- 8 or 12 Gbps of full-duplex bandwidth
- PCIe Gen 2 (5GT/s), x4

## Features

- Intel I350 Gigabit Ethernet Controller and drivers
- PCI-SIG SR-IOV support (Direct assignment)
  - » Up to 8 Virtual Functions per Port
- Virtual Machine Device queues (VMDq)
  - » 8 VMs per port (one queue per VM)
- 8 Tx and 8 Rx queues per port
- Teaming Support
- IEEE 802.3ad (Link Aggregation Control Protocol)
- Intel I/O Acceleration Technology
  - » Direct Cache Access (DCA)
  - » Low Latency Interrupts
  - » MSI-X support
  - » Receive Side Scaling (for Windows)
- Preboot eXecution Environment (PXE)
- iSCSI remote boot
- VLAN Support with VLAN tag insertion, stripping and packet filtering for up to 4096 VLAN Tags
- Intel PROSet Utility Support
- Advanced Packet Filtering
  - » 24 exact matched packets (unicast or multicast)
  - » 4096-bit hash filter for unicast and multicast frames
  - » Promiscuous (unicast and multicast) transfer support mode
  - » Optional filtering of invalid frames

# Product Specifications



Product Name

**Diamond head 8G4C**

**Diamond Head 12G6CB**

Number of ports

4 RJ45

6 RJ45

Slot Type

x4, PCI-e Gen2 (5GT/s)

x4, PCI-e Gen2 (5GT/s)

Speed

10/100/1000BASE-T

10/100/1000BASE-T

Form Factor

Low-profile, 4.75 in x 2.19 in

Std Height, 4.38 in x 4.38 in

Power Consumption

5W Max

10W Max

## Operating Systems Support

Windows Server 2003, 2008, 2012

Windows XP, Vista, 7, 8, 10

Linux 2.6x+

FreeBSD 7.2+

OpenBSD

Novel ODI

NetBSD

VMWare ESX 4.x+

XenServer

Microsoft Hyper-V

Vyatta 6.3+

MikroTik RouterOS

Nexenta 3.x+

## Applications

### Network Appliances

Unified Threat Management

SDN Router / Switch

Application Gateway

High Availability / Redundancy

### Servers

Link Aggregation

High Availability / Redundancy

Backup Networks

Storage / Web / DNS

Switch Bypass

### Virtualization

Increased Network Bandwidth

Multiple Dedicated VM Ports

Hypervisor Bypass

### Video over IP

Surveillance

IPTV

### SAN

iSCSI initiator

Increased Throughput

Switch Bypass

### Traffic Generator

Increased Bandwidth

Maximum Connectivity

## Additional Features

One Intel I350 Ethernet Controller

Dual On-chip Buffers

- Default transmit 20KB / port

- Default receive 36KB / port

Switch Fault Tolerance

Adaptive Load Balancing

Interrupt Moderation

Adapter Fault Tolerance

Receive Side Scaling (for Windows)

IPv6 offloading

Direct Cache Access (DCA)

I/O Acceleration Technology

DMA Coalescing

IEEE 1588 protocol and 802.1AS implementation

802.3az - Energy Efficient Ethernet (EEE)

802.1Q VLAN Tagging

802.3x Flow Control

802.1p Class of Services

802.3ad Link Aggregation

TCP and UDP Checksum Offload

TCP Segmentation Offload

Virtual Machine Device queues (VMDq)

VLAN support with VLAN tag insertion, stripping

and packet filtering for up to 4096 VLAN tags

9.5 KByte Jumbo Frames

## Environmental

Operating Temp

0 to 55 °C

Storage Temp

-40 to 70 °C

Operating Humidity

5 to 85% non-condensing

Storage Humidity

90% non-condensing relative humidity at 35 °C

Power Consumption

Quad-Port: 5.0 Watts / Six-Port: 11.0 Watts Max

RoHS 6 Complaint

Yes

Hardware certifications

FCC A, CE, VCCI, EN300-386

## Ordering Information

Product Name

Part Number

Diamond Head 8G4C

4C12440A3

Diamond Head 12G6CB

6C12470A1



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