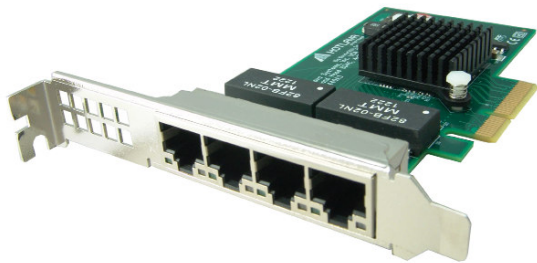
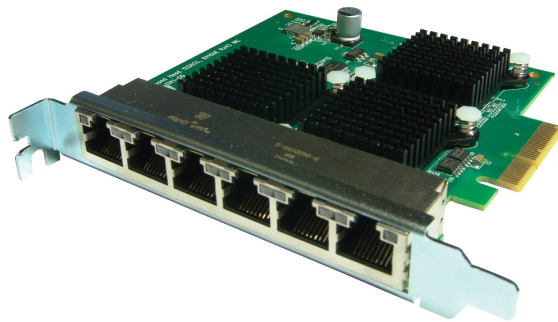


# Quad-Port and Six-Port RJ-45 Gigabit Ethernet Network Adapter

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

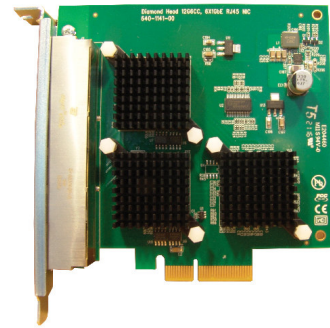
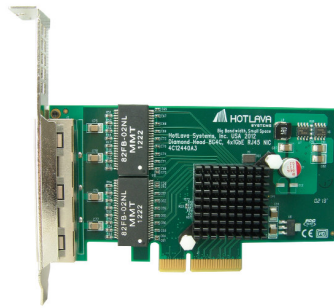
## Highlights

- 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 12G6CC**

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, 2016  
 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

IEEE 1588 protocol and 802.1AS implementation  
 802.3az - Energy Efficient Ethernet (EEE)

Switch Fault Tolerance

802.1Q VLAN Tagging

Adaptive Load Balancing

802.3x Flow Control

Interrupt Moderation

802.1p Class of Services

Adapter Fault Tolerance

802.3ad Link Aggregation

Receive Side Scaling (for Windows)

TCP and UDP Checksum Offload

IPv6 offloading

TCP Segmentation Offload

Direct Cache Access (DCA)

Virtual Machine Device queues (VMDq)

I/O Acceleration Technology

VLAN support with VLAN tag insertion, stripping and packet filtering for up to 4096 VLAN tags

DMA Coalescing

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

4C12470A3

Diamond Head 12G6CC

6C12470B1



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