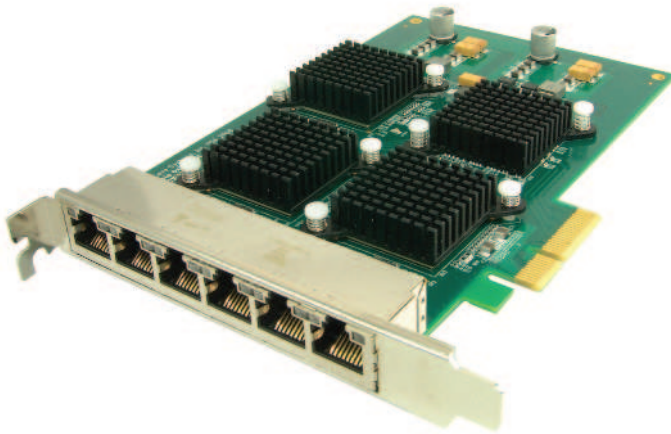


# Six-Port RJ-45 Gigabit Ethernet Network Adapter

## Maximum Port Density

HotLava System's six-port gigabit Ethernet NIC packs the maximum number of 3rd generation Intel GbE ports into a single PCI adapter. Designed for multi-core processors and optimized for virtualization, they are ideally suited for space constrained network appliances and servers.



Shasta 12G6

## Benefits

- Standard Intel drivers for easy installation without disruption of existing applications
- Wire speed bidirectional GbE performance
- Achieves greater productivity from virtualized servers
- Reduces or eliminates the network I/O bottleneck
- Requires only one half-length PCIe slot
- Provides more ports for network intensive applications
- Provides more ports for high availability applications
- Provides more ports for backup and redundancy applications
- Load balances across multiple CPU cores

## Highlights

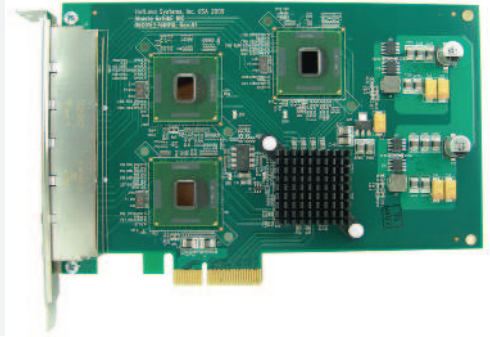
- Six RJ-45 GbE ports in one adapter
- 12 Gbps of bandwidth
- PCIe Gen 2 (5GT/s), x4
- Optimized for Virtualization

## Features

- 3rd generation GbE Intel 82576EB controllers and drivers
- Virtual Machine Device queues (VMDq)
- Eight queues per port
- Virtual Machine Device Connect (VMDc)
- PC-SIG SR-IOV (eight VF per port)
- Intel I/O Acceleration Technology
  - DMA Engine
  - Direct Cache Access (DCA)
  - Low Latency Interrupts
  - MSI-X support
  - Receive Side Scaling (for Windows)
  - Scalable I/O (for Linux)
- Preboot eXecution Environment (PXE)
- iSCSI remote boot
- IPsec offload
- LinkSec support
- VLAN support with VLAN tag insertion, stripping and packet filtering for up to 4096 VLAN tags
- Supports Intel PROSet Utility
- Advanced packet filtering
  - 24 exact-matched packets (unicast or multicast)
  - 4096-bit hash filter for unicast and multicast frames
  - Promiscuous (unicast and multicast) transfer mode support
  - Optional filtering of invalid frames

# Product Specifications

Product Name	<b>Shasta 12G6</b>
Slot Type	PCI Express Gen 2 (5GT/s), x4
Media Connector	(6) RJ-45 ports
Media Type	10/100/1000 BASE-T
Form Factor	6.58 in x 4.38 in
Status LEDs	Link Active, Link Speed, Link Activity



## Operating Systems Support

Windows Server 2003, 2008	NetBSD
Windows XP, Vista, 7	VMWare ESX
NetWare	XenServer
Linux	Microsoft Hyper-V
FreeBSD	Apple OS X (provided by www.small-tree.com)
OpenBSD	

## Features

Three Intel 82576EB Ethernet Controllers	
Dual On-chip Buffers	Optimized queues
- 160KB transmit / port	- 128 transmit / port
- 512KB receive / port	- 128 receive / port
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
Scaleable I/O (for Linux)	TCP Segmentation Offload
LinkSec Support	Virtual Machine Device queues (VMDq)
IPv6 offloading	Virtual Machine Device Connect (VMDc)
Direct Cache Access (DCA)	VLAN support with VLAN tag insertion, stripping and packet filtering for up to 4096 VLAN tags
I/O Acceleration Technology	9.5KByte Jumbo Frames
IPsec Offload	
PCI-SIG SR-IOV	

## Environmental

Operating Temp	0 to 55 °C with 100 LFM airflow
Storage Temp	-40 to 70 °C
Operating Humidity	5 to 85% non-condensing
Storage Humidity	0 to 85% non-condensing
Power Consumption	13W Max
RoHS 6 Complaint	Yes
Hardware certifications	FCC A, CE, VCCI, EN300-386

## Ordering Information

Product Name	Product Number
Shasta 12G6	6C12420A2

## Applications

### Network Security Appliances

Unified Threat Management  
Multi-purpose Gateway / Router  
Firewall / VPN  
Redundancy  
High Availability

### Servers

Link Aggregation  
High Availability  
Redundancy  
Backup Networks  
Storage / Web / DNS

### Virtualization

Increased Network Bandwidth  
Multiple Dedicated VM Ports

### Video over IP

Surveillance  
IPTV

### SAN

iSCSI initiator

### Traffic Generator

Increased Bandwidth  
Maximum Connectivity