

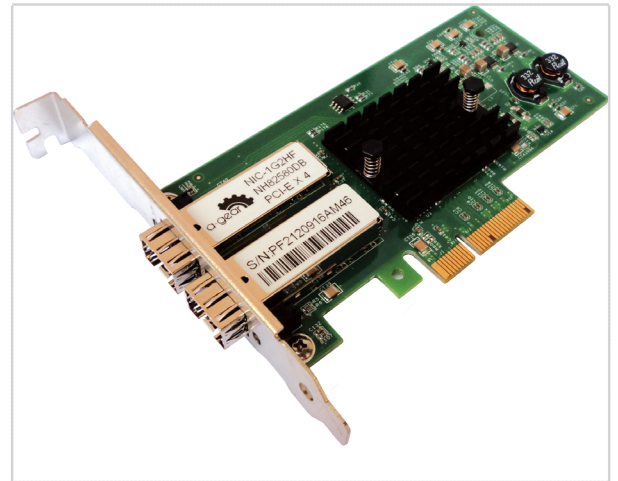
# Product Specification

## NIC-1G2HF

### Basic On INTEL® Dual-port (SX) Gigabit Ethernet PCI Express Server Adapter

#### 1. Features

- TCP/IP/UDP checksum calculation and T segmentation tasks
- Support VMs, each port supports 8 Virtual Machine Device Queues (VMDq)
- Support direct high-level cache access (DCA)CP
- Support Intel I/O AT 2.0
- MSI and MSI-X by minimizing device I/O interrupts, interrupt support dynamic
- Receive Side Scaling to minimize CPU utilization of multiprocessor systems
- Advanced storage architecture can reduce the delay
- Support multiple MAC address filtering
- Support the management and RMON statistics Statistics



#### 2. Introduction

A-GEAR PCI Express x4 Gigabit Ethernet fiber optic network interface card, multi-core processor server escalating deployment, apply in the continuous demand such as high-performance computing (HPC), database clusters and video-on-demand, promote the Gigabit connectivity.

The PCI Express adapter card with four Gigabit port is designed for servers and high-end equipment. And performance is optimized so that system I/O is no longer the bottleneck of high-end network applications.

The adapter can achieve fault tolerance through teaming; communication from the failed port is routed to the other members of the same group. The adapter has an integrated hardware acceleration that performs TCP/UDP/IP checksum offload and TCP segmentation. Host processing offloads accelerators frees CPU resources to handle other applications. The deployment of multiple network adapter cards and high-performance, mission-critical server applications and network environments the ideal solution. The adapter card is based on Intel 82580EB Gigabit Ethernet MAC + PHY (media access controller and physical interface transceiver) four-port controller.

The Dual-port server adapter card, on which you can add multi-port fiber-optic connections to improve network performance, while saving valuable PCI Express server slot.in the Gigabit Ethernet fiber network connections, PCI Express is equipped with special input

and output (I / O) bandwidth to ensure superior performance, and will not take the bus bandwidth. In addition, the adapter is designed in a multi-processor system showed excellent performance. When the receiver extension with Microsoft or Linux in a scalable I/O when used together, the two-port adapter card can effectively balance multiple central processing unit (CPU) between the network load.

The Gigabit Ethernet adapter, with excellent noise immunity, also supports long-distance fiber-optic connections. The adapter supports the Intel® PRO Intelligent Install and for Microsoft Device Manager (Device Manager) designed the new Intel® PROSet, simplifying installation and management processes. Extensive operating system support stable high-capacity architecture Intel PROSet simplifies adapter installation procedure process. With this program, you can simply click, configure and manage all Intel PRO Network Connections to meet your connectivity needs.

### 3. Key Features

Independent Fiber Gigabit Ethernet channels support Gigabit Ethernet 1000Base-SX 850nm SFP Gigabit interfaces, pluggable SFP LC Duplex connector Supports optical port and copper port.

### 4. Host Interface

PCI Express x4, compatible with x8 and x16 slot Support PCI Express Base Specification 2.0 (5.0GHz).

### 5. LAN features

- The channel capacity of large packet buffers, can be low CPU utilization
- Hardware acceleration that can offload the host processor task. The controllers can offload TCP/UDP/IP checksum calculations and TCP segmentation
- Support for virtual LANs - 802.1q VLAN tagging
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- Large Frame (jumbo packets up to 16KB)
- Link aggregation and load balancing
- Multiple CPU cores adaptive load balancing (ALB)
- Adapter fault tolerance (AFT), Switch Fault Tolerance (SFT)
- Support IEEE 802.x flow control
- Support IEEE 802.1p priority of the second layer coding
- Prioritization - 802.1p layer 2 priority encoding
- LED link/activity

## 6. Operating System Support

- Microsoft Windows NT
- Microsoft Windows 2000
- Microsoft Windows XP
- Microsoft Windows Server 2003
- Microsoft Windows Vista
- Microsoft Windows 7
- Microsoft Windows Server 2008
- Novell Netware 5.x, 6.x
- Linux
- FreeBSD 4.x or advance
- OS 8or advance
- SCO Open Server
- UnixWare / OpenUnix 8
- Sun Solaris x86
- OS Independent

## 7. Cable and the operation distance

- 275m at 62.5 um
- 550m at 50 um

## 8. Technical Specifications

<b>IEEE standards/network topology</b>	Optical Gigabit Ethernet, 1000Base-SX (850nm)
<b>Optical output power</b>	Typical: -6.0 dBm Minimum: -9.5 dBm
<b>Optical Receiver Sensitivity</b>	Typical: -21.0 dBm Maximum: -17.0 dBm
<b>Interface standard</b>	PCI Express 2.0 (5.0GHz)
<b>Board size</b>	127 mm x 85 mm
<b>PCI Express Interface card type</b>	x4 lane with x8 and x16 slot compatible
<b>PCI Express Voltage</b>	+3.3V ± 9%, +12V ± 8%
<b>Controller</b>	Intel® 82580EB controller
<b>Bracket</b>	Metal Bracket
<b>Power consumption</b>	5.9 W
<b>Operating Humidity</b>	0% – 90%, non-condensing
<b>Operating temperature</b>	0°C – 55°C
<b>Storage temperature</b>	-25°C – 85°C



## 9. LED/Connector Specifications

LED	1 LED per port, Link/ACT: link lights, flashing activity (green)
Connector	LC Interface

## 10. Ordering Information

Item	Description
A-GEAR NIC-1G-2HF	Two-port fiber (multimode) Gigabit Ethernet PCI Express Server Adapter