A-GEAR World Wide Manufacturing

Product Specification

NIC-1G-PF

A-GEAR PRO Gigabit PF Single Port Server Adapter

Apply Trusted Gigabit Fiber SFP connection for servers in PCI Express * slot.

1. Features

- Build on PCI Express Technology and Intel original gigabit controller technology.
- Based on gigabit SFP transceivers which be optional and replaceable.
- High-performance gigabit SFP transceivers (1000BASE-SX, 1000BASE-LX or 1000BASE-ZX) connections for slot-constrained servers.
- Gigabit scalability and increased uptime through advanced server features.

2. Product Description

Take advantage of PCI Express (PCIe*) server slots and fiber- optic connectivity to enhance network performance with the A-GEAR PRO Gigabit Single Port Server Adapter (NIC-1G-PF). A-GEAR PRO Gigabit Single Port Server Adapter (NIC-1G-PF) design, is base on intel original controller chip, PCI Express bus, SFP slot and LC cable fiber connectivity, to achieve professional gigabit Ethernet network connectivity. they can added multi-port fiber connectivity, trust SFP transceivers connectivity in a single PCI-E bus interface within one server adapter, to enhance network performance and also saving valuable PCI Express (PCIe*) server slots.
In Gigabit Ethernet connection of optical network, PCIe equip the dedicated input/ output (I/O) Bandwidth can guarantee superior performance, and do not take up bus bandwidth. In addition, A-GEAR PRO Gigabit Single Port Server Adapter (NIC-1G-PF) design, can demonstrate excellent performance among multi-processor system. When used in conjunction with the receiver extension of Microsoft or Linux* scalable I/O devices, A-GEAR PRO Gigabit Single Port Server Adapter (NIC-1G-PF) can be balance effectively among the

network load of multiple CPU cores, so to improve the performance of multiprocessor systems.
The A-GEAR PRO Gigabit Single Port Server Adapter (NIC-1G-PF) represents the third generation of A-GEAR PRO Gigabit Single Port Server Adapter (NIC-1G-PF) for Gigabit Ethernet, and features the high noise immunity and long-distance reach of fiber-optic connectivity. Based on Intel original gigabit controller, for easy installation and management, all A-GEAR PRO Gigabit Single Port Server Adapter (NIC-1G-PF) are supported by Intel PRO Intelligent Install and the new Intel PROSet for Microsoft* Device Manager. PROSet Utility simplifies adapter installation and gives you point-and-click power to configure and manage all your PRO Gigabit Network Connections in order to meet your connectivity needs.

3. Product Specifications

3.1. General and Technical Features

Manufacturer Product Name	A-GEAR PRO Gigabit Single Port Server Adapter (NIC-1G-PF)
Product Code	NIC-1G-PF
Form Factor	Internal-connected with servers, Workstations and Others
Controller-Processor	Intel 82572EI *1
Bus Type	PCI Express 2.0a
Bus Width	x4 lane PCI Express operable in x4, x8, x16 slots
Bus Speed (x4, encoded rate)	10 Gbps uni-directional; 20 Gbps bi-directional
Network Interface Type	Single-Port, SFP Slots *1
Data Rate(s) Supported	10, 100, and 1000 Mbps per port
Optional Connection Parts	SFP Transceiver *1, (1000BASE-SX,1000BASE-LX,1000BASE-ZX), LC fiber optical cables
IEEE Network Standards	IEEE 802.3(1000BASE-SX, 1000BASE-LX, 1000BASE-ZX)
Typical Power Consumption	3.3 W (3.3 V & 1 A)
Hardware Certifications	FCC B, UL, CE, VCI, BSMI, CTICK, MIC
LEDs	1 (color) solid and blinking
Brackets *2	Includes a full-height bracket and a low profile bracket

3.2. Environment Standard

Operating Temperature	0°C ~ 55°C
Operating Humidity	85%
Stoke Temperature	-20°C ~ 65°C
Stoke Humidity	85%

3.3. NOS Software Support

Microsoft Windows* Server 2003, Enterprise, Datacenter (32- and 64-bit)
Microsoft Windows 2000
Red Hat Linux* 2.4x or later (32- and 64-bit)
FreeBSD 4.x or later
Novell Netware* 5.x, 6.x
Sun Solaris* x86, OS 8 and later
SCO Open Server 5, Open Unix 8*

3.4. Network Management

Wired for Management (WfM) baseline v2.0 enabled for servers
DMI 2.0 support, Windows Management Instrumentation (WMI) SNMP manageable SM Bus support
Remote Installation Services (RIS)
Diagnostics (loopback, testability, PHY register access)
Advanced configuration and power interface (ACPI) 1.0 power management
Wake on LAN* support over PCI Express*
PXE 2.0 enabled through boot read-only memory (ROM)

3.5. Physical Dimensions

Length	13.7 cm (5.39 in)
Width	6.8 cm (2.68 in)
Height of Brackets	12.0 cm/8 cm (4.72 in/3.15in)
Packing Standard Size (Unit)	20 x 15 x 4.5 (cm) (7.87 x 5.91 x 1.77 (in))

4. Features and Benefits

Features	Benefits
Gigabit Ethernet SFP Port	Apply Gigabit Fiber SFP connection in a single PCI Express * slot, you can apply high-performance PCI Express * SFP Transceiver (1000BASE-SX, 1000BASE-LX or 1000BASE-ZX) connection adapters in limited server slot .and with the advanced server features to achieve multi-gigabit scalability and uptime.

Features	Benefits
Apply with SFP Slots, install the fiber optic module according to demand	Compatible with all single-mode or multimode Gigabit SFP optical modules, You can configure the module based on your operating requirements, to achieve meeting your needs and the optimal allocation of resources.
Apply Intel 82571EB Gigabit Controller	Enables two Gigabit connections in a single adapter, delivering increased bandwidth for slot-constrained servers and providing high performance, reliability, and low power use in a single, integrated, dual port PCI Express Gigabit Ethernet controller chip
Load balancing on multiple CPUs	Increases performance on multi-processor systems by efficiently balancing network loads across CPU cores when used with Receive-Side Scaling from Microsoft or Scalable I/O on Linux*
Interrupt moderation	Delivers increased performance while significantly reducing CPU utilization
Compatible with x4, x8, and x16 full-height 2 PCI Express* slots	Allows dual-port operation in almost any PCI Express server slot, except x1 slots, and allows each port to operate without interfering with the other
Support for most network operating systems (NOS)	Enables widespread deployment
Remote management support	Reduces support costs with remote management based on industry-wide standards
PROSet Utility for Microsoft* Device Manager	Provides point-and-click power over individual adapters, advanced adapter features, connection teaming, and virtual local area network (VLAN) configuration
LC connectors	Small connector design is compatible with the latest fiber-optic cabling standard 1000BASE-SX,1000BASE-LX or 1000BASE-ZX, multi-mode or single-mode cables which lengths up to 120km meters distance.
RoHS compliant3, Lead-free1 technology	Compliant with the new European Union directive (effective July 2006) to reduce the use of hazardous materials
Product backing	Backed by A-GEAR limited lifetime warranty, 3-months replacement guarantee, and 3-years global services warranty, and worldwide support.

5. Product Features and Advanced Software Features

- Auto-negotiation, full-duplex capable
- Lead-free1 technology

- Integrated media access control (MAC) and physical layer (PHY)
- PRO Set Utility and PRO Intelligent Install for easy installation
- Support standard plug and play specification
- Support SFP transceivers exchange
- Adapter fault tolerance (AFT)
- Switch fault tolerance (SFT)
- Fast Ethernet Channel*5 (FEC)
- Adaptive load balancing (ALB)
- Gigabit Ethernet Channel*5 (GEC)
- IEEE 802.1p*
- IEEE 802.1Q* VLANs
- IEEE 802.3* (z, ab, u, x) flow control support
- IEEE 802.3ad* (link aggregation control protocol) 5
- Interrupt moderation INTA, INTB Interrupt levels
- Support scales up to 8 connections teaming
- EEPROM-SPI and single EEPROM support
- Supports 4 separate teams, maximum, Multiple teams
- PCIe Hot Plug*/Active
- peripheral component interconnect (PCI)
- TCP checksum offload
- TCP segmentation/large send offload (TCP—transmission control protocol)
- Switch configuration Test, with major switch original equipment manufacturers (OEMs).

6. Companion Products

A-GEAR Ethernet server adapter has been tested for compatibility, available from 10/100 Mbps to 1000Mbps and 10 Gbps, optical fiber or copper, gigabit SFP transceivers SM or MM, 10 gigabit Ethernet SFP+ transceivers, can be adaptive plug replacement, extensive using PCI Express * and single to dual to quad ports configurations.

7. Customer Support

A-GEAR Customer Support Services offers a broad selection of programs including phone support, online service and warranty service. We offer you good service including 3-months replacement guarantee, and 3 years global warranty services and worldwide support.