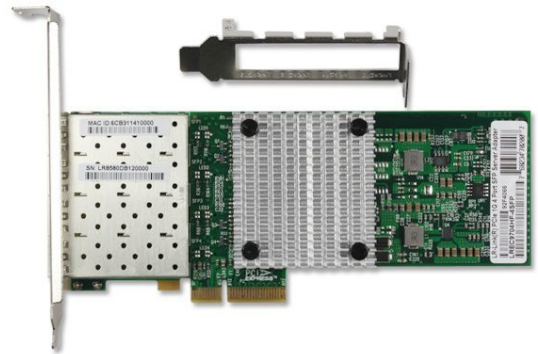## DW-LCII350-4SFP
PCI Express x4 Quad Port SFP Gigabit Server Adapter (Intel I350 Based)

Key Features

♦ Halogen-free quad-port Gigabit Ethernet adapters with fiber interface options

♦ Innovative power management features including Energy Efficient Ethernet (EEE) and DMA Coalescing for increased efficiency and reduced power consumption

♦ 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

♦ High-performing bridgeless design supporting PCI Express* Gen 2.1 5GT/s

♦ Reliable and proven Gigabit Ethernet technology from Intel Corporation

Overview

The new DW-LCII350-4SFP builds on DONGWE's history of excellence. DONGWE continues its market leadership with this new generation of PCIe* GbE network adapters. Built with the bridgeless Intel® Ethernet Controller I350, these adapters represent the next step in the Gigabit Ethernet (GbE) networking evolution for the enterprise and data center by introducing new levels of performance through industry-leading enhancements for both virtualized and iSCSI Unified Networking environments.This new family of adapters also includes new power management technologies such as Energy Efficient Ethernet (EEE) and DMA Coalescing (DMAC).

Flexible I/O Virtualization

The DW-LCII350-4SFP includes Intel® Virtualization Technology for connectivity (Intel® VT-c) to deliver I/O virtualization and Quality of Service (QoS) features designed directly into the controller on the adapter.I/O virtualization advances network connectivity models used in today's servers to more efficient models by providing Flexible Port Partitioning (FPP), multiple Rx/Tx queues, and on- controller QoS functionality that can be used in both virtual and non-virtual server deployments.

By taking advantage of the PCI-SIG SR-IOV specification, the adapter enable Flexible Port Partitioning (FPP). With FPP,virtual controllers can be used by the Linux* host directly and/or assigned to virtual machines.With this port partitioning,administrators can create up to eight dedicated connections on a single Ethernet port for use in baremetal and virtualized server deployments.

In a bare-metal Linux server, host processes can be assigned to dedicated network resources to provide traffic isolation and balanced bandwidth allocation.

In a virtualized environment, a VM can be assigned to a virtual controller to reduce the CPU overhead seen when using

a software-based network bridge by offloading network traffic management to the controller.

Scalable iSCSI Performance

An DW-LCII350-4SFP with native iSCSI initiators built into Microsoft* Windows*, Linux*, and VMware* ESX platforms provides a simple, dependable, cost-effective way to connect to iSCSI SANs. These native initiators are broadly tested using multiple generations of operating systems, storage systems, and OS tools to help ensure reliability and ease of use. Standardizing on Intel® Ethernet Adapters for iSCSI enables administrators to use a single initiator, TCP/IP stack, and a common set of management tools and IT policies.In addition,Intel® Ethernet Server Adapters include a number of hardware features designed to accelerate iSCSI traffic and enhance data processing.

For example, TCP segmentation offload and checksum offload capabilities help reduce processor usage, increase throughput, and deliver exceptional iSCSI performance. Finally, using native OS initiators, an DW-LCII350-4SFP supports the CRC-32 digest instruction set included with Intel® Xeon® processor products,which improves transmission reliability and delivers an enterprise-class iSCSI solution.

Power Management Technologies

Today, companies everywhere are looking for ways to decrease energy consumption across the enterprise to reduce costs and environmental impact, while at the same time solving increasingly important power density challenges. That's why DONGWE has introduced new, advanced Power Management Technologies (PMTs)with the DW-LCII350-4SFP that enable enterprises to configure power options on the adapter and more effectively manage their power consumption.

Energy Efficient Ethernet (EEE)

The DW-LCII350-4SFP supports the IEEE802.3az Energy Efficient Ethernet (EEE) standard so that, during periods of low network activity, EEE reduces the power consumption of an Ethernet connection by negotiating with a compliant EEE switch port to transition to a low power idle (LPI) state.This reduces the controller power to approximately 50% of its normal operating power, saving power on the network port and the switch port. As soon as increased network traffic is detected, the controller and the switch quickly come back to full power to handle the increased network traffic.
EEE is supported for both 1000BASE-T and100BASE-TX.

DMA Coalescing

Another power management technology that can reduce power on the server platform is DMA Coalescing (DMAC). Typically, when a packet arrives at a server, DMA calls are made to transfer the packet within the server. These calls wake up the processor, memory and other system components from a lower power state in order to perform the tasks required to handle the incoming packet.
Based on the configurable DMAC settings, incoming packets are buffered momentarily before any DMA calls are made. This enables the controller to intelligently identify opportunities to batch multiple packets together so that when components are wakened from lower power states they can efficiently handle the batched packets at the same time. This enables platform components to remain in lower power states longer, which can dramatically reduce platform energy consumption. DMAC synchronizes DMA calls across all controller ports to ensure maximum power savings.

Software Tools and Management

DONGWE® Advanced Network Services (DONGWE® ANS) include new teaming technologies and techniques such as Virtual Machine Load-Balancing (VMLB) for Hyper-V environments. Today, DONGWE ANS includes a variety of teaming configurations for up to eight adapters, support for mixed vendors server adapters teaming and includes support for 802.1q VLANs, making DONGWE ANS one of the most capable and comprehensive tools for supporting server adapter teaming.

Additionally, DONGWE® PROSet for Windows* Device Manager and PROset CL extends driver functionality to provide additional reliability and Quality of Service features and configuration.

General Features

♦ Intel® Ethernet Controller I350

♦ With PCI Express* V2.1 (5 GT/s) Support

♦ Low-Profile and Standard height full

Ethernet Features

♦ IEEE* 802.3 auto-negotiation

♦ 1Gb/s Ethernet IEEE 802.3, 802.3u, 802.3ab PHY specifications Compliant

♦ Integrated PHY for 10/100/1000 Mb/s for multispeed, full, and half-duplex

♦ IEEE 802.3x and 802.3z compliant flow control support with software-controllable Rx thresholds and Tx pause frames

♦ Automatic cross-over detection function (MDI/MDI-X)

♦ IEEE 1588 protocol and 802.1AS implementation

Power Management and Efficiency

♦ <1W S0-Max (state) 1000BASE-T Active 90oC (mode)

♦ <400mW S0-Typ (state) 100BASE-T Active (mode)

♦ IEEE802.3az - Energy Efficient Ethernet (EEE)

♦ DMA Coalescing

♦ Smart Power Down (SPD) at S0 no link / Sx no link

♦ Active State Power Management (ASPM) Support

♦ LAN disable function

♦ Full wake up support

• Advanced Power Management (APM) Support (formerly Wake on LAN)

• Advanced Configuration and Power Interface (ACPI) specification v2.0c

• Magic Packet* wake-up enable with unique MAC address

♦ ACPI register set and power down functionality supporting D0 and D3 states

♦ MAC Power Management controls

♦ Low Power Link Up - Link Speed Control

♦ Power Management Protocol Offload (Proxying)

♦ Latency Tolerance Reporting (LTR)

I/O Virtualization Features

♦ Eight transmit (Tx) and receive (Rx) queue pairs per port

♦ Flexible Port Partitioning:

♦ 32 Virtual Functions on Quad-port or 16 Virtual Functions on Dual-port

♦ Support for PCI-SIG SR-IOV specification

♦ Rx/Tx Round-Robin Scheduling

♦ Traffic Isolation

♦ Traffic Steering

♦ VM to VM Packet forwarding (Packet Loopback)

♦ MAC and VLAN anti-spoofing

- Malicious driver detection

- Storm control

- Per-pool statistics, offloads, and jumbo frames support

- Independent Function Level Reset (FLR) for Physical and Virtual Functions

- IEEE 802.1q Virtual Local Area Network (VLAN) support with VLAN tag insertion, stripping and packet filtering for up to 4096 VLAN tags

- IEEE 802.1q advanced packet filtering

- Mirroring rules

- Support for Simple VEPA

- VF Promiscuous modes

Stateless Offloads/Performance Features

- TCP/UDP, IPv4 checksum offloads (Rx/ Tx/Large-send); Extended Tx descriptors for more offload capabilities

- IPv6 support for IP/TCP and IP/UDP receive checksum offload

- Tx TCP segmentation offload (IPv4, IPv6)

- Transmit Segmentation Offloading (TSO)

- Interrupt throttling control

- Legacy and Message Signal Interrupt (MSI) Modes

- Message Signal Interrupt Extension (MSI-X)

- Intelligent interrupt generation

- Receive Side Scaling (RSS) for Windows environment

- Scalable I/O for Linux environments (IPv4, IPv6, TCP/UDP)

- Support for packets up to 9.5K Bytes (Jumbo Frames)

- Low Latency Interrupts

- Header/packet data split in receive

- PCIe v2.1 TLP Processing Hint Requester

- Descriptor ring management hardware for Transmit and Receive

Remote Boot Options

♦ Preboot eXecution Environment (PXE) flash interface support

♦ Intel® Ethernet iSCSI Remote Boot for Windows, Linux, and VMware

♦ Intel Boot Agent software:

♦ Linux boot via PXE or BOOTP, Windows* Deployment Services, or UEFI

Manageability Features

♦ Management Component Transport Protocol (MCTP)

♦ Firmware Based Thermal Management

♦ IEEE 802.3 MII Management Interface

♦ MAC/PHY Control and Status

♦ Watchdog timer

♦ Extended error reporting

♦ Controller Memory Protection

♦ Vital Product Data (VPD) Support

Adapter Product Features

♦ Plug and play specification support

♦ Intel® I/O Acceleration Technology (Intel® I/OAT)

♦ Ships with full-height bracket installed; low-profile bracket included in package

Technical Features

♦ Data rate supported per port: 1000 Mbps

♦ Bus type: PCI Express* 2.1 (5 GT/s))

♦ Bus width: 4-lane PCI Express; operable in x4, x8 and x16 slots

♦ Interrupt levels: INTA, INTB, INTC, INTD, MSI, MSI-X

♦ Controller-processor: Intel Ethernet Controller I350

♦ Power consumption (typical): 6.0 W

♦ Storage temperature: -40 °C to 70 °C (-40 °F to 158 °F)

♦ Operating temperature :0 °C to 55 °C (32 °F to 131 °F)

♦ Storage humidity: 90% non-condensing relative humidity at 35 °C

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Network Operating Systems (NOS) Software Support

- DOS, Novell ODI
- Windows XP 32-bit（64-bit）
- Windows Server 2003 32-bit（64-bit）
- Windows Vista 32-bit（64-bit）
- Windows 7 32-bit（64-bit）
- Windows 8 32-bit（64-bit）
- Windows 8.1 32-bit（64-bit）
- Windows Server 2008 32-bit（64-bit）
- Windows Server 2008 R2 32-bit（64-bit）
- Windows Server 2012
- Windows Server 2012 R2
- Linux 2.4 series kernel、2.6.x、3.x
- FreeBSD 7.x or most of the FreeBSD
- UnixWare / Open Unix 8
- Sun Solaris x86
- Xen4
- VMware

Ordering Information:

Part Number	Description
DW-LCII350-4SFP	PCI Express x4 Quad Port SFP Gigabit Server Adapter (Intel I350 Based)

PS: The above details is just for reference,if there is any change,no inform will have.