Part No.: 271307
Vendor Part No.: ALL0148-4-25G-SFP28

ALLNET PCIe 25G X8 Quad Port Network Card Copper SFP28 • Intel E810 • ALL0148-4-25G-SFP28

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Highlights

- **4 × 25GbE SFP28 ports** – up to 100 Gbit/s total throughput per direction (TX/RX)
- **Intel® Ethernet Controller E810-CAM1** from the Intel® Ethernet 800 Series
- **PCI Express 4.0 x16** (16 GT/s), backwards compatible with PCIe 3.0
- **Flexible port speeds:** 25 / 10 / 1 GbE per port
- **RDMA support** for iWARP and RoCEv2 as well as SMB Direct (Storage over Ethernet)
- **Comprehensive virtualisation:** SR-IOV with up to 256 virtual functions, 8 physical functions, 768 VSIs
- **Overlay networks:** VxLAN, NVGRE and GENEVE
- **Application Device Queues (ADQ)** and **Dynamic Device Personalisation (DDP)**
- **IEEE 1588v2 Precision Time Protocol (PTP)** for precise time synchronisation
- **Enhanced DPDK** to accelerate Network Functions Virtualisation (NFV)
- **Jumbo frames** up to 9,728 bytes
- **Full-height slot bracket fitted**, low-profile slot bracket included

Product description

The **ALLNET ALL0148-4-25G-SFP28** is a high-performance quad-port network adapter for servers and workstations, combining four 25-Gigabit SFP28 ports on a single PCIe card. At its heart is the Intel® Ethernet Controller E810-CAM1 from the Intel® Ethernet 800 Series – an architecture designed for dynamic workloads in cloud, enterprise and communications environments.

Via the PCI Express 4.0 x16 interface, the card delivers up to 100 Gbit/s throughput for both transmission and

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reception – at up to 80 million packets per second (TX) and 90 million packets per second (RX). Each port supports 25, 10 or 1 GbE and can be flexibly configured using the Ethernet Port Configuration Tool (EPCT). This makes the adapter ideal for high port density where the number of slots is limited.

For virtualisation environments, the card offers SR-IOV with up to 256 virtual functions, 8 physical functions and 768 virtual station interfaces. Microsoft VM Queue (VMQ), VMware NetQueue, Next-Generation VMDq and Intel® Ethernet Adaptive Virtual Function (AVF) are supported, as are overlay protocols such as VxLAN, NVGRE and GENEVE.

With RDMA over iWARP and RoCEv2, Intel® Data Direct I/O Technology and SMB Direct, the adapter accelerates memory-intensive applications and reduces the CPU load. Application Device Queues (ADQ) ensure consistent, predictable application performance, whilst Dynamic Device Personalisation (DDP) makes packet processing more efficient. Enhanced DPDK accelerates NFV applications, packet forwarding and packet processing.

Thanks to the IEEE 1588v2 Precision Time Protocol, the card enables precise time synchronisation. Stateless offloads (TCP/UDP segment offload, large segment offload, checksum offload), Data Centre Bridging (ETS, PFC, QCN) and link aggregation round off the range of features. The card is supplied with a full-height slot bracket already fitted; a low-profile slot bracket for shallow chassis is included.

Drivers & Download

Technical Specifications

Part Number	ALL0148-4-25G-SFP28
Product series	Intel® E800 25GbE network adaptor
Controller	Intel® Ethernet Controller E810-CAM1
Host interface	PCI Express 4.0 x16 (16 GT/s), backwards compatible with PCIe 3.0
Ports	4 × SFP28
Data rates	25 / 10 / 1 GbE per port
Throughput	100 Gbit/s per TX and RX; up to 80 Mpps (TX) / 90 Mpps (RX)
25 Gbit network protocols	25GBASE-CR, 25GBASE-KR, 25G-AUI C2C, 25G-AUI C2M, 25GBASE-CR1, 25GBASE-KR1
10 Gbit network protocols	10GBASE-KR, 10G SFI, 10G SFP+
IEEE standards	IEEE 802.3by (25 GbE), IEEE 802.3ae (10 GbE), IEEE 802.3ap (auto-negotiation and KR startup), IEEE 802.3ad / 802.1AX (link aggregation), IEEE 802.1Q / 802.1p (VLAN and priority), IEEE 802.1Qau (QCN), IEEE 802.1Qaz (ETS), IEEE 802.1Qbb (PFC), IEEE 802.1Qbg, IEEE 1588v2
Virtualisation	8 Physical Functions (PF), SR-IOV with up to 256 Virtual Functions (VF), 768 Virtual Station Interfaces

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	(VSI), Next-Generation VMDq, Microsoft VMQ, VMware NetQueue, Intel® Ethernet AVF, VLAN, VxLAN, NVGRE, GENEVE
Advanced Technologies	RDMA (iWARP and RoCEv2), Intel® Data Direct I/O Technology, SMB Direct, ADQ, DDP, Enhanced DPDK
Offloads	TCP/UDP segment offload, large segment offload, checksum offload
PCIe Features	Up to 256 concurrent non-posted requests
Jumbo Frames	Up to 9,728 bytes
Configuration	Ethernet Port Configuration Tool (EPCT)
Operating systems	Windows 11 / 10; Windows Server 2016 / 2019 / 2022; RHEL 9.1 / 8.7; SLES 15 SP4; Ubuntu 22.04 / 20.04; Debian 11; FreeBSD 13 / 12.3
Power consumption	Max. 22 W
Operating temperature	0 °C to 60 °C
Storage temperature	–40 °C to 70 °C
Humidity (storage)	Max. 90% relative humidity at 35 °C, non-condensing
LED indicators	Activity (flashing) and link speed
Dimensions (PCB)	167 × 69 mm
Slot bracket	Full-height mounted, low-profile version included
Certifications	CE, FCC, RoHS

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