

Agilio[®] GX 2x10GbE SmartNIC

SMARTNIC FOR HIGH-PERFORMANCE CLOUD, SDN AND NFV NETWORKING

The Agilio GX Series is a highly secure and advanced SmartNIC. It is a proven SmartNIC solution demonstrated through effectively offloading, such as virtual switching, routing, and providing reliable hardware SRIOV virtualization support and standardized offload interface software. This allows release of valuable server CPU resources and therefore significantly reduces capital expenditures and increases bandwidth and general performance.

The SmartNIC hardware features dual ports (10GbE) supporting critical functions, including various tunnel encapsulation and decapsulation, traffic load balancing, accurate traffic metering, flexible flow exact/cardinality matching, and action-based stateless/stateful flow processing.



CPU Offloads

- TCP/UDP/IP stateless offload
- TSO,GSO,GRO,checksum offload
- RSS (also on encapsulated packet)
- Data Plane Development Kit (DPDK) for kernel bypass application
- Open vSwitch (OVS) offload
- Flexible match-action flow tables
- Tunneling encapsulation / decapsulation
- Intelligent interrupt coalescence

Hardware-Based I/O Virtualization

- SR-IOV
- Address translation and protection
- Configurable and user-programmable QoS
- OVS ingress policing and meter per flow QoS for VMs

Overlay Networks

- Stateless offloads for overlay
- network tunneling protocols
- Hardware offload of encapsulation and decapsulation of VXLAN, NVGRE, GENEVE and MPLS overlay networks

SPECIFICATIONS

Interfaces	2-port 10GbE, SFP+
Memory	512MB/2GB LPDDR4 onboard memory
Operating Systems*	Red Hat Enterprise Linux (RHEL), CentOS, Ubuntu
Hypervisors	Linux KVM
Ethernet	PCIe Base 3.0-compliant 1.1- and 2.0-compatible 2.5, 5.0 or 8.0GT/s link rate x8 MSI-X vector per RX/TX queue pair Interrupt coalescing PCIe mapped LAN, UART
Connectivity	IEEE 802.3ae 10 Gigabit Ethernet IEEE 802.3ad Link aggregation and failover IEEE 802.1Q.1p VLAN tags and priority IEEE 802.1Qaz D0.2 ETS IEEE 802.1Qbb (PFC) Jumbo frame support (9KB) Configuration and diagnostic tools
Weight	125g
Dimension	68.9mm x 167.65mm x 18.71mm

*Please ask Corigine represe for the latest supported O/S and Hypervisors



ENVIRONMENTAL REQUIREMENTS

Operating Temp	0-55°C
Storage Temp	-40-70°C
Relative Humidity	5% to 95% non-condensing
Air Flow	250 LFM (min)

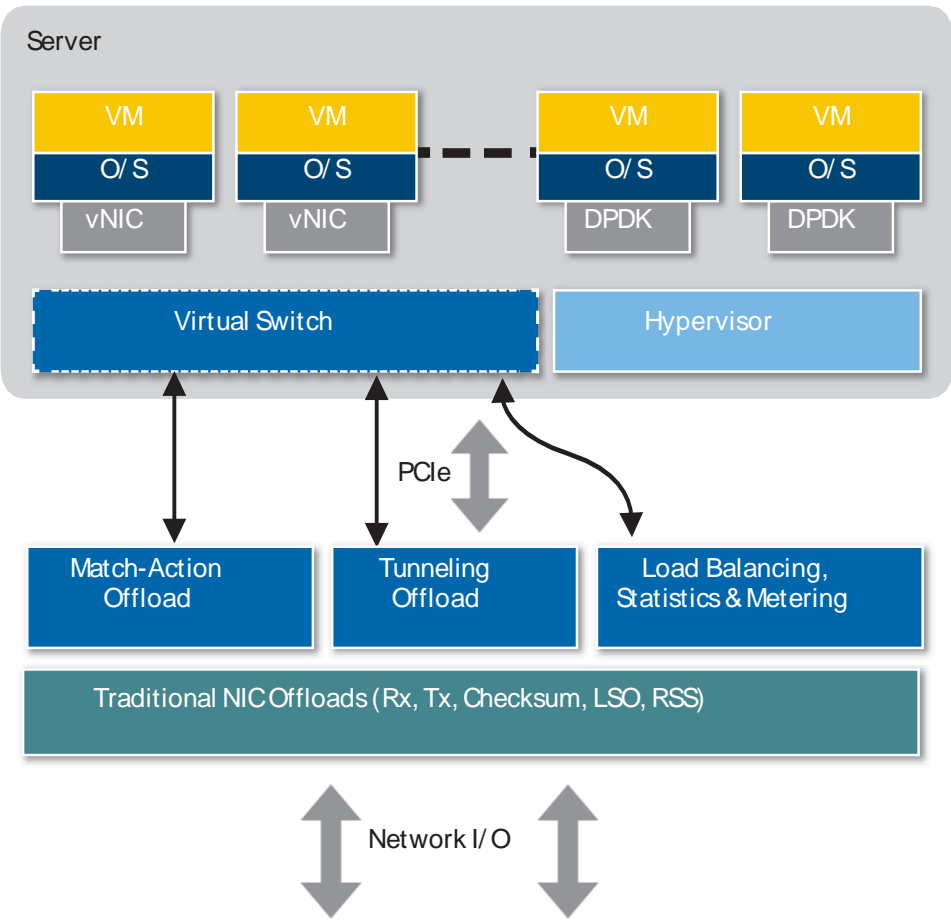
AGENCY APPROVALS

Certification	CE, RoHS, REACH,RCM,TUV
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ORDERING PART NUMBER

ISA-3800-10-2-2-C-512MB

Agilio GX 2x10GbE SmartNIC Block Diagram



Management and Control

- I²C interface for device control and configuration
- General Purpose I/O pins
- SPI interface to Flash
- JTAG IEEE 1149.1 and IEEE 1149.6

Remote Boot

- Remote boot over Ethernet
- Unified Extensible Firmware Interface (UEFI)
- Pre-execution Environment (PXE)

Other Features

- Programmable for custom tunnel types
- Flexible exact match-action and wildcard policy offloads
- In-hardware flow cache for cut-through acceleration
- Stateless and stateful load balancing
- Per-flow metering and QoS
- Multiple queue per virtual machine
- Deep packet inspection (DPI)
- Atomic operations
- Per-flow real-time statistics
- 1M exact match flows
- 480k wildcard flows

Corigine

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