



# NETRONOME

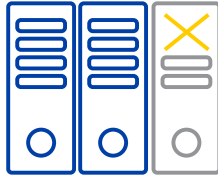
Bringing Software Innovation Velocity to Networking Hardware



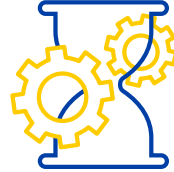
Netronome invented the flexible network flow processor and hardware-accelerated server-based networking.

Netronome unites the speed and flexibility of software innovation with the performance and efficiency of hardware. With Netronome, you get the efficiencies of mega-scale data centers in your own commercial off-the-shelf (COTS) server and networking infrastructure.

# Avoid Data Center Growing Pains



**Limited Scale**



**Slow Innovation**

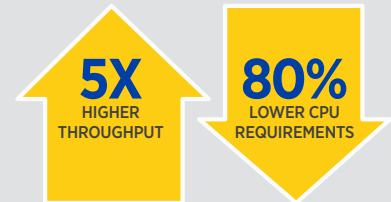


**Higher Cost**

Data center operators in organizations of any size are challenged to do more with their compute resources, to innovate more rapidly and at lower costs. They need new ways to deliver business applications and services in a more agile and secure way, while driving down overall TCO.

## How We Help

Netronome utilizes a unique flow-processing-optimized silicon and software architecture that works in conjunction with standard and open source server-based networking software. Netronome increases services revenue and lowers data center CAPEX by delivering intelligent server networking solutions that run on industry-standard servers.

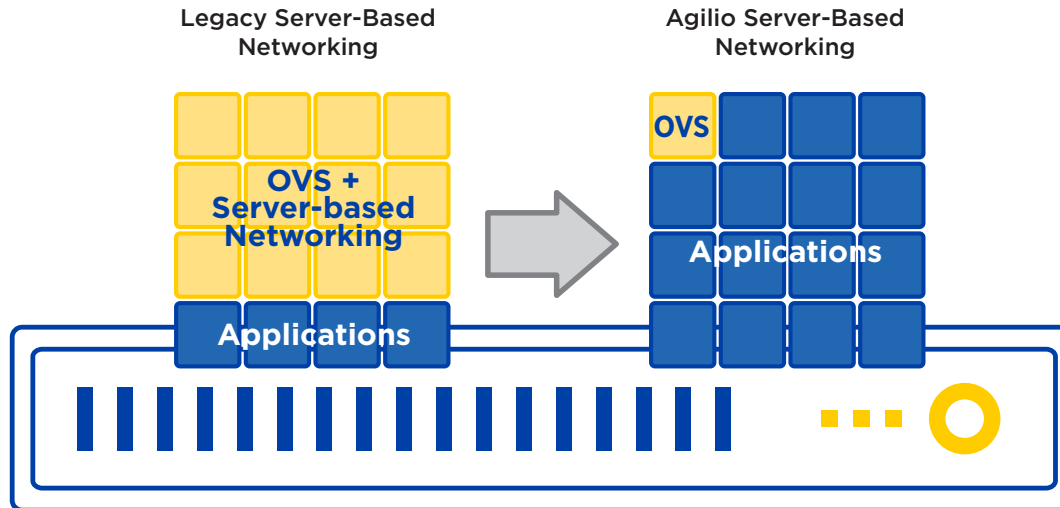


# Alleviate Data Center Sprawl

Get **3 to 6X savings**  
through intelligent server-based networking



# Agilio® Server-Based Networking Drives 5X CAPEX Reduction



Legacy server-based networking consumes as many as 12 cores, leaving only four cores for applications. Output per server becomes restricted, significantly reducing efficiency and driving up CAPEX.

**Agilio server-based networking consumes only one CPU core, leaving 15 cores for applications.**

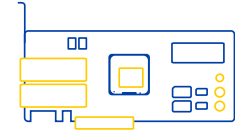
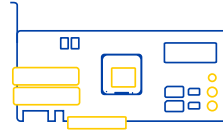
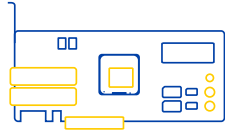
## SmartNICs

Server-based networking enables flexibility and rapid innovation by leveraging the networking software used in servers. Netronome's SmartNICs transparently offload and accelerate networking functions with capabilities such as virtual switching, virtual routing, connection tracking and virtual network functions, and Linux firewall bringing the efficiencies of mega-scale data centers to businesses of all sizes.

The Agilio CX 10GbE, 25GbE and 40GbE SmartNIC platforms fully and transparently offload virtual switch and router datapath processing for networking functions such as overlays, security, load balancing and telemetry, enabling compute servers used for server-based networking and cloud computing to save critical CPU cores for application processing while delivering significantly higher performance. Netronome Agilio CX platform features standard low-profile PCIe SmartNICs and software, designed for general-purpose x86 commercial off-the-shelf (COTS) rack servers, fitting needed operating system, power and form factor requirements.

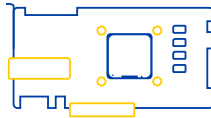
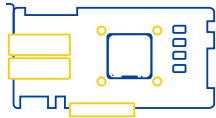
The Agilio LX family of SmartNICs are specifically designed for virtualized and non-virtualized x86 server-based service nodes and WAN Gateways. The solution delivers significant scaling and efficiencies for networking functions such as security (e.g., IDS/IPS, NGFW, DDoS), load balancing and gateway applications.

## Agilio CX SmartNICs



<b>Part Number</b>	ISA-4000-10-2-2	ISA-4000-25-2-2	ISA-4000-40-1-2 / ISA-4000-40-2-2
<b>Description</b>	2-port 10 Gigabit Ethernet	2-port 25 Gigabit Ethernet	1/2-port 40 Gigabit Ethernet
<b>Interface</b>	PCIe Gen3x8	PCIe Gen3x8	PCIe Gen3x8
<b>Form Factor</b>	Low Profile	Low Profile	Low Profile
<b>Optics</b>	SFP+	SFP28	QSFP

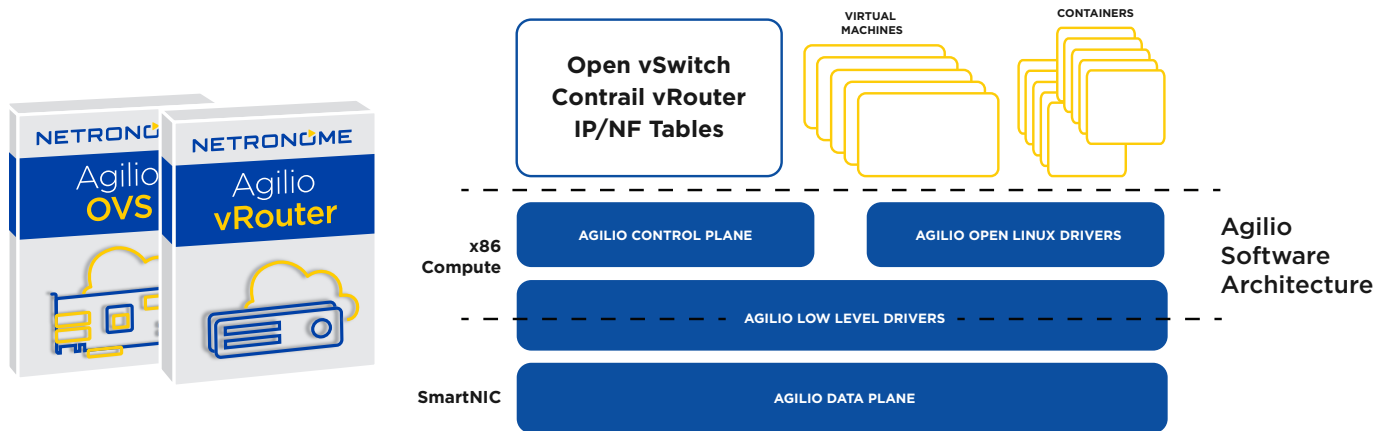
## Agilio LX SmartNICs



<b>Part Number</b>	ISA-6480-40F-20-AA-2	ISA-6480-100CXP-10-AA-2
<b>Description</b>	2-port 40 Gigabit Ethernet, optional 2xPCIe	1-port 100 Gigabit Ethernet, optional 2xPCIe
<b>Interface</b>	PCIe Gen3x8	PCIe Gen3x8
<b>Form Factor</b>	Full Height	Full Height
<b>Optics</b>	QSFP	CXP

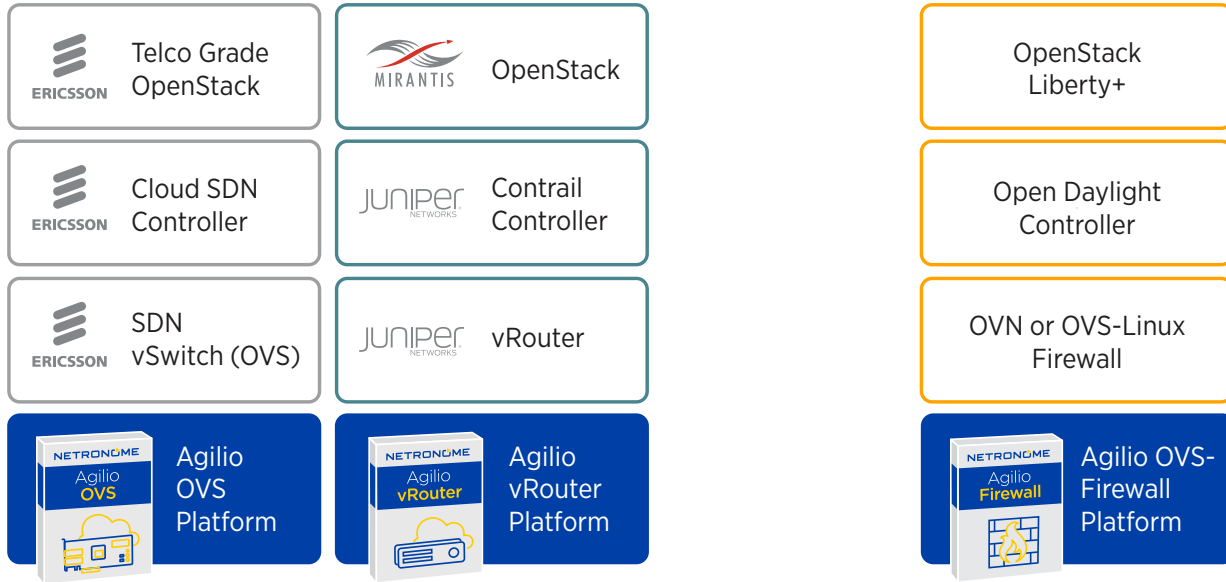
# Offload and Accelerate Server-Based Networking

Netronome Agilio Software works with the Agilio CX and Agilio LX family of SmartNICs, supporting compute node and service node applications. It accelerates and scales critical server-based networking applications such as network virtualization, security, load balancing and telemetry, which are provided using standard, open source software such as Open vSwitch (OVS), vRouter, Linux IP Tables and Connection Tracking. Since server-based networking applications such as OVS are transparently offloaded while keeping standard interfaces such as OVSDB and OVS CLI intact, the Agilio high-performance solution can be seamlessly provisioned using SDN controllers such as Open Daylight and cloud orchestration tools such as OpenStack. This, combined with Extreme Virtio (XVIO), now brings the same performance to Virtio-based VM workloads.





# Whole Product Solutions: For Telco, Cloud & Enterprise IT

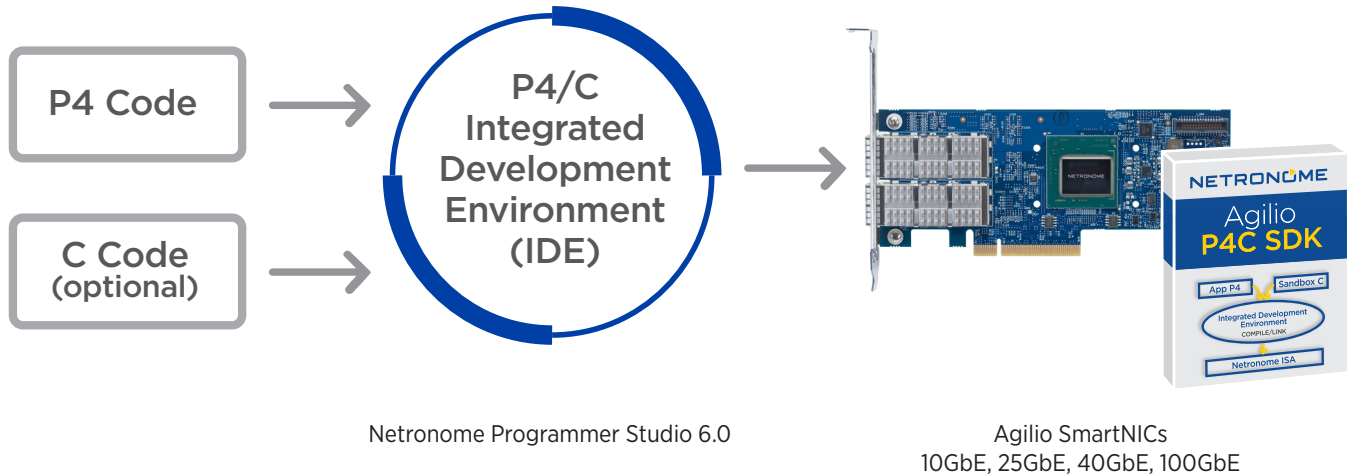


Delivers **5X higher** VM performance  
Lowers TCO by up to **6X**

Adds **Stateful Firewall Security**  
Lowers TCO by up to **6X**

# Netronome Agilio P4/C SDK Integrated Development Environment (IDE)

- Seamless programming of SDN applications into the production Agilio solution
- Utilizes open source P4 compiler, language from the P4 Language Consortium
- Extensions enable optional C-based modules for sophisticated functions



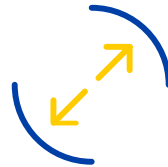
# Higher Developer Productivity and Faster Time to Market

Delivers predictable development ROI and ensures investment protection



## PRODUCTIVITY

Cuts the number of lines of code by more than 10X



## EXTENSIBILITY

Allows extension of production Agilio software with custom features



## PROTECTION

Utilizes standard and open source P4 compiler and language

Bringing high-end capabilities within the economies of COTS servers



## OBSERVABILITY

Enhances ability to statefully observe connections per app by 10X



## FLEXIBILITY

Dynamically monitor and respond in real-time



## COMPUTABILITY

Significantly reduces computation data to what is most relevant

# NETRONOME

Bringing Software Innovation Velocity to Networking Hardware

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