# Lenovo Flex System Fabric CN4093 10Gb Converged Scalable Switch

## Industry-leading flexibility, scalability and performance



## Reduce Cost, Complexity

Many clients today are connecting Ethernet and Fibre Channel from their servers into their data and storage networks. As a result IT organizations are looking for ways to reduce the cost and complexity of these environments by leveraging the capabilities that exist today with 10/40Gb Ethernet and/or 8Gb Fibre Channel. Some solutions require a complete rip-n-replace of existing infrastructure. The Lenovo Flex System Fabric CN4093 10Gb Converged Scalable Switch is an ideal solution for clients with these concerns because it can fit into their existing infrastructure and offers the benefits of a converged infrastructure today, plus it can scale with their needs in the future. The CN4093 supports multiple protocols like Ethernet, FCoE, FC and iSCSI. With multi-protocol support it can connect directly to an external SAN.

## Simple Connectivity

To provide clients with both flexibility and investment protection as their connectivity needs evolve over time, the Flex System Fabric CN4093 supports multiple operational modes. For clients seeking a simple transparent connection to their existing network but do not require advanced Layer 2 or Layer 3 networking capabilities, the CN4093 may be utilized in easy connect mode. This operational mode often helps avoid tensions between system and network administrators. However, the CN4093 may also be utilized in standard mode for clients who need to take advantage of its feature-rich suite of enterprise class Layer 2 and Layer 3 capabilities. In either scenario the CN4093 delivers reduced cost and complexity inside the Flex System chassis by reducing the number of adapters and supporting protocols like Data Center Bridging/Converged Enhanced Ethernet (DCB/CEE). This allows clients to break out Ethernet and FC separately from the chassis to connect to separate data and storage networks.

## Port Scalability

The CN4093R provides extreme scalability which can help reduce cost, complexity and enable rapid deployment today or in the future. Pay-as-you-grow scalability allows clients to easily and

cost effectively enable additional ports through the purchase of a simple software license key. Additionally, the new flexible port mapping feature offers unmatched configuration customization by allowing any active port on the CN4093 to be designated as either an internal or external port. This capability provides clients with the ability to choose their external connectivity with either SFP+ or OmniPorts or trading off for 40Gb QSFP+ based on application needs. With this capability, a client can deploy a pair of CN4093 modules to support an application/environment requiring up to six 10Gb server ports helping lower capital and operational costs, plus reduce power requirements. Supporting this application would require other vendors to deploy up to six Ethernet modules.

The flexibility continues with OmniPorts which provide clients with the flexibility to choose 10Gb Ethernet, 8Gb FC or both for external upstream connections. OmniPorts in FC mode provide flexible, scalable and convenient access to FC storage with full FC fabric services. In addition when combined with a compute node on board LOM or a CN4054 Virtual Fabric adapter, the CN4093 offers a cost-effective simple solution that combines the benefits of network convergence (FCoE or iSCSI) and Virtual Fabric. With Feature on Demand, clients can turn on additional internal ports, external upstream OmniPorts or 40Gb Ethernet ports.

## Increase Performance

With the growth of virtualization and the evolution of cloud, many of today's applications require low latency and high bandwidth performance. The Flex System Fabric CN4093 switch supports low latency and up to 1.28Tbps, while delivering full line rate

performance, making it ideal for managing dynamic workloads across your network. In addition, the switch provides a rich Layer 2 and Layer 3 feature set that is ideal for many of today's data centers, plus offers industry-leading 40Gb external uplinks.

## Cloud Ready

With the majority of IT organizations implementing virtualization, there is an increased need to reduce the cost and complexity of their environments. These requirements are addressed by removing multiple physical I/O ports. Virtual Fabric provides a way for you to separate a pair of 10Gb ports into virtual NICs (vNIC) to meet those requirements. To help deliver maximum performance per vNIC, plus provide higher availability and security with isolation between vNIC's, the switch leverages capabilities of its Networking Operating System. Furthermore, the CN4093 offers benefits of next-generation vNIC—Unified Fabric Port (UFP). UFP is an advanced, cost-effective solution that pro- vides a flexible way for clients to allocate, reallocate and adjust bandwidth to meet their ever-changing data center requirements. In addition, delivering advanced virtualization awareness helps simplify management and automates VM mobility by making the network VM-aware—for all major hypervisors—with VMready.

## Why Lenovo

Lenovo is the leading provider of x86 systems for the data center. The portfolio includes rack, tower, blade, dense and converged systems, and supports enterprise class performance, reliability and security. Lenovo also offers a full range of networking, storage, software and solutions, and comprehensive services supporting business needs throughout the IT lifecycle.

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## Specifications

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| **Performance** | • 100% line rate performance<br>• 1.28Tbps non-blocking throughput (full duplex) |
| **Interfaces** | Flexible port mapping provides users the ability to assign ports based on their needs. Each internal 10Gb port, external 10Gb SFP+ port or OmniPorts counts as a single 10Gb port license. It is possible to exchange any combination of 10Gb internal, 10Gb external port and/or OmniPort into a single external 40Gb QSFP+ port license. A single external 40Gb QSFP+ port license can also be broken out into four 10Gb port licenses. 40Gb ports can only be used as external ports. The CN4093 supports a maximum of 12 OmniPorts. The CN4093 supports upgrades in any order. |
| **Base Module (PN 00FM510)** | • 14 x 10Gb internal, plus 6 x OmniPorts and 2 x 10Gb SFP+ external uplinks<br>• With flexible port mapping, clients have 24 port licenses that can be applied to the internal and external ports. |
| **Upgrade 1 License (PN 00D5845)—Requires Base Module** | • Enables additional 14 x 10Gb internal and 2 x40Gb external uplinks<br>• With flexible port mapping, client enables an additional 22 port licenses (Total of 46 with the base) that can be applied to the internal and external ports. |
| **Upgrade 2 License (PN 00D5487)—Requires Base Module** | • Enables additional 14 x 10Gb internal and 6 x OmniPort external uplinks<br>• With flexible port mapping, client enables an additional 20 port licenses (Total of 44 with the base) that can be applied to the internal and external ports. |
| **When Leveraging Base License + Upgrade 1 + Upgrade 2** | Clients have a total of 640Gb (42 internal 40 Gb ports, 2 external SFP+, 12 OmniPorts and 2 x 40Gb QSFP+ ports). |
| **Stacking** | Up to two CN4093 and six EN4093R switches available using either 40 Gb or 10 Gb ports for stacking |
| **Power Consumption** | Typical power consumption of 141W |
| **Warranty** | 1-year limited warranty or takes on the warranty of the chassis when installed in a chassis. |
| **For More Product Details and Associated Options** | Refer to the CN4093 Product Guide |

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## For More Information

To learn more about the Flex System CN4903 10Gb Converged Scalable Switch, contact your Lenovo Business Partner or visit **lenovo.com**/systems/networking

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