## Flex System PCIe Expansion Node

Expand compute nodes for more capability



Over time, IT systems have become more complex and difficult to manage. Without the right systems in place, you run the risk of spending too much time on operations and maintenance and not enough time on innovation. You need a flexible infrastructure that can meet today's ever-changing business demands.

The Flex System<sup>™</sup> PCIe Expansion Node is an element of the PureFlex family, which combines compute, storage, networking, virtualization and management into a single system that anticipates resource needs to help you optimize your infrastructure. The PCIe Expansion Node allows you to attach additional PCIe adapters, fabric mezzanine adapters and next-generation graphics processing units (GPU) to a Flex System compute node, which expands the compute node's capability.

The Flex System PCIe Expansion Node is ideal for a variety of application environments, including:

- Specific networking environments that require direct PCIe adapter connectivity to Flex System compute nodes
- Application environments that are written to take advantage of acceleration and visualization performance-leveraging GPUs connected to Flex System compute nodes

A complete list of supported Flex System compute nodes, adapters, and operating systems is available on the ServerProven® web page at: **ibm.com**/systems/info/ x86servers/serverproven/compat/us/flex.html

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## Why System x

System x® 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. System x also offers a full range of networking, storage, software and solutions, and comprehensive services supporting business needs throughout the IT lifecycle.



| Specification        |  |
|----------------------|--|
| Supported bus widths | 1x, 2x, 4x, 8x and 16x*  |
| Adapter capacity     | Two full-length, full-height x16<br>Two half-length, half- height x8   |
| Adapter sizes        | Standard-height adapters, 4.20-inch (106.7 mm)<br>Low-profile adapters, 2.536-inch (64.4 mm)<br>Half-length adapters, 6.6-inch (167.65 mm)<br>Full-length adapters, 12.283-inch (312 mm) |
| Adapter quantities   | Up to two low-profile adapters<br>Up to two full-height adapters<br>Up to one full-height, doublewide adapters   |
| PCIe standards       | Supports 1.1 and 2.0   |
| Generation           | Generation 1- and Generation 2-compliant adapters <sup>†</sup>   |
| Power                | Supports greater than 75 W PCIe adapters using standard PCIe auxiliary power connectors <sup>‡</sup>   |
| Form factor          | Flex System™ standard node   |
| Chassis support      | Flex System Enterprise Chassis   |
| I/O Expansion        | 2x Mezz adapters (x8+x4)   |
| Warranty             | 3-year customer replaceable unit and onsite service, next business day 9×5, service upgrades available   |
| Management           | iMM V2, RTMM KVM Dongle  |

## For more information

To learn more about the Flex System PCle Expansion Node, visit: **ibm.com**/systems/pureflex/ or contact your Lenovo representative or Business Partner.

- \* PCIe mechanical connectors limit larger lane add-in cards from being inserted into smaller mechanical connectors.
- $^{\dagger}$  Generation 3-compliant adapters will operate using Generation 2 compliance.
- <sup>‡</sup> Contact your representative for additional information on other high-wattage adapters that can be supported.



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IBM x86 products are now products of Lenovo in the U.S. and other countries. Learn more at ibm.com/lenovo-acquisition



