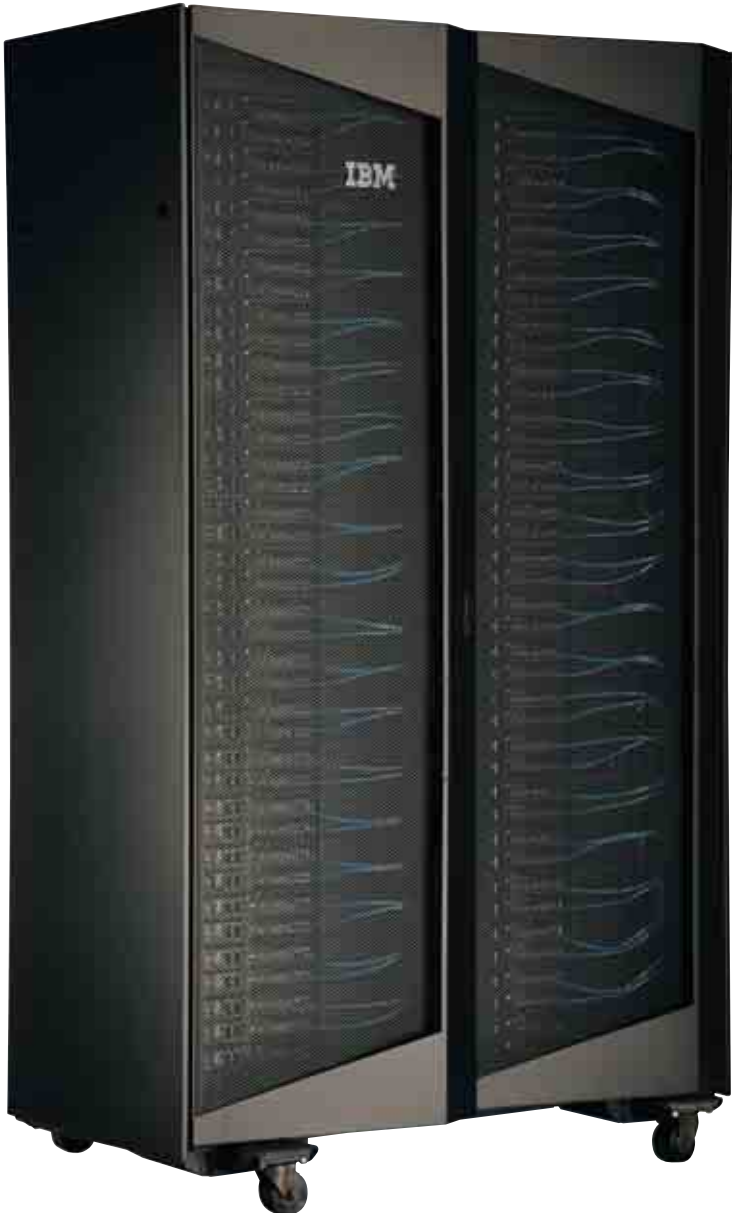**Right-size your Internet-scale data center. Pack more processors into the same power and cooling envelope, better utilizing space**

IBM

IBM System x iDataPlex

Highlights

- *Innovative, flexible design for Internet-scale computing*

- *Improve energy efficiency by up to 40%[1]*

- *Reduce cooling costs dramatically; minimize or even eliminate data center air conditioning expense[2]*

- *Increase server density by up to 240%*

- *Up to 5X compute density for efficient space utilization*

- *Customized and delivered fully configured to meet your unique business requirements*

- *Front-accessible and intelligent components simplify deployment, serviceability and manageability*

Your data center is being squeezed. Your business demands more to power the Internet, to do massive scale-out computing for Web 2.0, high performance computing (HPC) and corporate data processing. At the same time, an increasing amount of your IT budget is going to energy expenses, so every penny in your budget is squeezed— from the cost of system acquisition to power and cooling expenses. The conventional scale-out data center model can't keep up. A new data center model is needed—IBM System x™ iDataPlex™.

For Internet-scale computing, iDataPlex Intel® Xeon® processor-based servers help pack more processors into the same power and cooling envelope, better utilizing floor space, and creating the right-size data center design. Facing constraints such as insufficient space, limited electricity, inadequate cooling capacity and, ultimately, a limited budget, you need a powerful, scale-out solution that not only expands with your explosive computing demand, but can keep power and cooling costs in check. iDataPlex technology offers an innovative design to address the needs of the data center with extreme density and simplified manageability while reducing power and cooling consumption. IBM delivers the customized solution to

your data center, ready to plug in. It's easy to deploy and efficient to operate. iDataPlex technology lets you stay focused on your business and the bottom line.

Innovative design saves space

In today's fast-paced IT environment, overcrowded data centers are becoming more and more common—which means IT managers are simply running out of room to expand. An iDataPlex solution can help with these problems because its unique rack design is optimized to save floor space. The innovative rack architecture more than doubles the server density over standard 1U racks, so you can pack more processing power into a highly efficient, compact system without adding more floor space to your data center.

Design decreases, may even eliminate, air conditioning

The IBM Rear Door Heat eXchanger, part of an iDataPlex solution, allows you to have a high-density data center environment that won't increase cooling demands—and may actually lower them. The Rear Door Heat eXchanger eliminates the heat coming off the rack even if it's fully populated with 84 servers[3]. With further adjustments, the Rear Door Heat eXchanger can be

iDataPlex technology delivers innovative design for optimized density in the data center.

used to actually cool the room—helping reduce or even eliminate the need for air conditioning in the data center[2]. Using an iDataPlex solution with the Rear Door Heat eXchanger could mean the difference between keeping data center costs under control or seeing them skyrocket.

Incredible power efficiency

Traditional servers can drive up costs with high operational expenses as data centers expand rapidly to accommodate business growth. IBM System x engineers designed iDataPlex racks and nodes specifically to address data center power-constraint challenges— they use up to 40% less power than similarly configured standard 1U servers[1]. Simply put, the iDataPlex design is efficient and cost-effective— so you can go green and save.

Decreased cooling expenses

The innovative iDataPlex design does more than just save power and space—it also helps save cooling costs. Traditional servers emit heat that leaves you struggling to keep the data center cool and running efficiently, but the iDataPlex rack and node design delivers better airflow, Intel processors, and energy-efficient processing to reduce server heat exhaust by up to 40%[1]. And, all this is before adding the effects of including the innovative and incredibly effective Rear Door Heat eXchanger.

Flexible configuration for customized data centers

Unique businesses need unique IT architectures, which is why iDataPlex systems feature a modular design that can accommodate different customers' needs. With the iDataPlex design, you can combine up to 100U of servers, chassis, switches, power distribution units, management appliances and heat exchangers per rack—all to create the right solution for your organization's specific requirements. With either a 2U Flex Node chassis or a 3U chassis, you can define the combination of compute-intensive, networking or storage-rich modules you need. This gives you greater flexibility to optimize for your application set and specific business needs. And, you can also take advantage of direct-attached storage to boost memory and protect mission-critical data.

Better manageability means you can concentrate on your business

Starting on day one, you can get up and running quickly with customized, factory-integrated racks delivered right to your data center. With an intelligent rack full of easily manageable components, the iDataPlex solution aggregates information for a single point of reference. One quick glance is all it takes to know everything's working correctly, saving you valuable time and effort so you can focus on more important tasks.

An iDataPlex solution is built on industry standards and uses third-party options so you can work with industry partners you trust. And because they feature complete front access, iDataPlex servers are easy to maintain and

update—you won't need to reach a back panel to get the job done. In short, it's designed to make your life easier.

IBM: The right choice

An iDataPlex solution is the right-size choice for Web 2.0 and HPC customers who need greater compute density, better space utilization in the data center, and more controllable power and cooling costs. Not only do you get the business benefits of implementing IBM iDataPlex technology—but there's something else that makes the choice even smarter: a chance to go green and save. By the end of the decade, IBM would like to reduce server power consumption by half, cap the data center carbon footprint, and eliminate servers from landfills by encouraging customers to return old servers for recycling. It's all part of a drive to improve the environment—another example of how IBM is an innovative, earth-friendly industry leader.

For more information

World Wide Web

| U.S. | **ibm.com**/systems/x/hardware/idataplex/index.html |
| Canada | **ibm.com**/systems/x/hardware/idataplex/index.html |