

# Lenovo's ThinkCentre M90z is taking back the corporate desktop by eliminating clutter

## Lenovo's ThinkCentre M90z AIO Desktop Features

### Background

For Technology Business Research to develop this whitepaper, it was essential to gain a clear understanding of Lenovo's goals in designing the ThinkCentre M90z to reduce desktop clutter while incorporating increased performance and end-user multitasking and reducing management effort and electricity costs. To support the level of knowledge required, TBR conducted a series of interviews with Lenovo's ThinkCentre M90z design and marketing managers. The findings in this paper are also supported by a series of interviews conducted by TBR with Lenovo customers through TBR CSAT (Customer Satisfaction) studies for corporate desktops, as well as targeted research on Lenovo's ThinkVantage technologies.



- ü **More Space** – ThinkCentre M90z offers 70% more space on the desktop than a ThinkCentre M90p tower and ThinkVision display
- ü **Improved performance** – ThinkCentre M90z offers up to 80% more performance than previous ThinkCentres, such as the M55p
- ü **Manageability** – Intel vPro Technology provides remote, out of band management
- ü **Productivity** – Support for up to two additional displays for three screens, enabling greater productivity; built-in VoIP and video conferencing
- ü **Energy efficiency** – An 85% efficient power supply and Auto-Brightness Control result in savings of up to \$62 in annual energy costs

Lenovo is allowing business employees to reclaim their desktops from clutter. The company's ThinkCentre M90z gives back the significant amount of space taken up by today's desktop PC towers. The ThinkCentre M90z's integrated or all-in-one design simply takes up less space. It melds an LCD screen with all of the components traditionally found in a desktop tower, including the 2010 Intel Core Processor Family, a hard drive and an optical drive.

The M90z gives back space for working on tasks, including multitasking by dedicating room to additional LCD displays, which allow access to larger amounts of data without having to tab through multiple screens. The M90z's design also allows collaboration between employees through built in videoconferencing features.

Although the ThinkCentre M90z's footprint is smaller than a ThinkCentre M Series tower and display, it is no more costly and no less efficient or manageable. The M90z provides the same levels of performance, power efficiency and manageability as Lenovo's ThinkCentre M90 tower. The M90z is equipped with the 2010 Intel Core vPro Processor Family to provide management and productivity benefits. This means that businesses can provide their employees with space savings, creating more space to work, while remotely managing the machine, regardless of whether or not it is powered on. This combination of improved productivity and cost savings helps significantly reduce the overall cost of managing the ThinkCentre M90z when compared to a 4-year-old desktop such as the ThinkCentre M52.

## Lenovo's ThinkCentre M90z needs only one wire

### ThinkCentre M90z: More productivity in less space

- The ThinkCentre M90z desktop features the 2010 Intel Core i5 processor to enable multi-tasking.
- ThinkCentre M90z save takes up 70% less space than other ThinkCentre M90 Series desktops, based on footprint measurements. Cable clutter is reduced by the use of a wireless keyboards and mouse as well as Intel Centrino wireless networking.



SOURCE: LENOVO

**Lenovo, through attention to detail in the design process, created ThinkCentre M90z all-in-one desktop PC to provide businesses and their employees with an efficient, space-saving, multitasking tool.** Although the effects of deploying the desktop are less clutter and greater productivity for the end user, the M90z also provides businesses with cost savings from improved manageability and energy efficiency, in addition to providing features that increase security and protect investments.

**ThinkCentre M90z saves space, avoids clutter:** Designed for the enterprise customer, the M90z makes room on the desktop by incorporating its 23-inch LCD screen within its chassis, eliminating the need for a tower and a separate display. By incorporating the screen, the M90z provides end users with 70% more space on the desktop, compared with Lenovo's ThinkCentre M Series tower PCs. The ThinkCentre M90z all-in-one desktop also reduces clutter by decreasing the number of wires and cables on the desktop to one by providing options for an Intel Centrino Wireless Card and a wireless keyboard and mouse. The result is less cable clutter and a simplified management experience, since IT departments need only track a single item versus two; a desktop tower and a separate LCD display.

**ThinkCentre M90z focuses on security:** Lenovo designed its ThinkCentre M90z all-in-one desktops to offer hardware-based security and data protection to ensure the safety of critical data. The desktop is equipped with Lenovo's ThinkVantage

Client Security Solution, one part of Lenovo's suite of ThinkVantage Technologies (TVTs). The Client Security Solution works in conjunction with a Trusted Platform Module (TPM) to manage enhanced security processes for both wired and wireless networking. Lenovo's optional Hardware Password Manager, also a Lenovo TVT, serves as a password repository; users need only remember one password to log

on to the machine, while IT managers can remotely access and reset passwords if necessary. The HPM feature helps protect data, while improving management by allowing IT to remotely reset forgotten passwords, eliminating downtime or desktside visits. The M90z also features an option for a chassis intrusion switch that, when activated, alerts the IT department. This helps prevent theft of items such as hard drives and memory. The collective effects of the Intel Core vPro Processor Family and Lenovo security software include the ability for businesses to customize their security filters and defense features to meet their needs. Intel's vPro technology incorporates Intel Active Management Technology, a hardware-software management agent, which works to improve security and facilitate remote management of the M90z. Lenovo's also offers an optional Kensington Cable Lock security feature for the M90z, which helps prevent the desktop from being stolen.

"The ThinkCentre M90z is an all-in-one commercial desktop that offers the same level of performance, manageability and efficiency as a premium traditional desktop in the market today."



Mei Lee,  
Product Manager of  
ThinkCentre M90z, Lenovo

**Lenovo's ThinkCentre M90z provides convenience:** Lenovo designed the M90z to offer easy accesses to its internal components with a tool-less design. The desktop can be opened

## Lenovo's ThinkCentre M90z delivers tower-like performance in a small package

### Lenovo's ThinkCentre M90z Convenience Features

- **The AIO's tool-less design** enables the components of the PC to be easily accessible, thus enabling quick and easy replacements of memory and HDD.
- **The M90z's use of Lenovo Enhanced Experience for Windows 7** allows a 32-second boot time, increasing productivity and convenience.



SOURCE: LENOVO

without tools and allows hard drive and memory to be replaced in as little as one minute. The easy-to-carry back handle featured on the M90z facilitates easy transport of the desktop computer if necessary. All of the aforementioned factors create a work environment in which there is less cost and downtime tied to workplace IT issues.

### ThinkCentre M90z is designed for efficient performance:

Lenovo's decision to power the ThinkCentre M90z with the 2010 Intel Core i5-650 processor, part of the Intel Core i vPro Processor Family, permits the desktop to provide end users with 80% better overall performance when compared with 4-year-old ThinkCentre M52 series desktop PCs. The Intel Core i5 Processor Family is based on Intel's latest 32-nanometer manufacturing technology. The processor provides greater performance by leveraging Intel Turbo Boost, Intel HD Graphics and Intel Hyper-Threading technologies, while using the same or less power. Thus the processor provides improved energy efficiency.

The ThinkCentre M90z is part of Lenovo's line of Enhanced Experience business PCs run on Windows 7. Lenovo and Microsoft created the Windows 7 Enhanced Experience to be available on select Lenovo models, including the M90z, to provide optimal functionality. The effect of EE optimization on the M90z is ultrafast boot-up and shut-down times of 32 and nine seconds, respectively. The convenience of rapid start-up and shut-down times leads to increased productivity.

**Green:** Lenovo designed the ThinkCentre M90z to be energy-efficient and sustainable right down to its core. Of its plastic components, more than

40% are comprised of post-consumer content (PCC). The PCC content in a ThinkCentre M90z is the equivalent to that contained in 65 large, 20.5g plastic bottles. While more eco-friendly in terms of the materials it is constructed from, the M90z is also more energy-efficient when compared with a 4-year-old desktop. Lenovo accomplished this by incorporating a host of energy efficient features, including an 85%-efficient power supply and an ambient light sensor. Using the sensor, the desktop automatically adjusts its screen's brightness. This both improves usability for the end user and reduces energy consumption by adjusting the amount of electricity drawn by the screen.

### Lenovo's ThinkCentre M90z Green Features



**Lenovo First:** Lenovo claims first TCO Certified EDGE all-in-one desktop PC  
**Certifications:** ENERGY STAR, EPEAT Gold and GREENGUARD  
**Post Consumer Content (PCC):** 42% of the ThinkCentre M90z's plastic components are PCC, reducing its environmental impact

SOURCE: LENOVO

The 85%-efficient power supply reduces electricity consumption during the process of converting alternating current or "wall" power to direct current used internally in the desktop. Lenovo combined the efficient power supply and ambient light sensor with its ThinkVantage Power Manager software, which enforces power management profiles that limit the machine's electricity usage, while also allowing centralized control of the machine's energy usage by IT departments. IT managers can remotely power off PCs left on in the evening after employees depart. Together, the features significantly reduce the annual power consumption of ThinkCentre M90z machines when compared to the four-year-old or five-year-old desktops they are likely to replace. The M90z has the potential to save up to \$62 per year on energy costs when compared with a 4-year-old ThinkCentre M52 desktop. Given its construction using PCC and its energy efficiency, the M90z retains certifications for energy

## Lenovo's ThinkCentre M90z delivers efficiency in both cost and productivity measures

efficiency and sustainability, including ENERGY STAR and EPEAT Gold as well as GREENGUARD. Lenovo can also claim a world first for the M90z. The all-in-one desktop is both Lenovo's and the world's first AIO desktop to attain TCO Certified EDGE status, according to the company. TCO Certified EDGE specifications consider the impact products have on the environment, including their overall energy efficiency, design for recyclability, such as utilizing post consumer content and the recyclability of their packaging. TCO Certified Edge also weighs product lifecycles and usability criteria such as electrical safety and an ergonomic design. As the first TCO Certified EDGE all-in-one desktop computer, the M90z shows that Lenovo continues to work to improve the efficiency of its desktops while reducing their environmental impact.

**ThinkCentre M90z display options focus on increased productivity and usability:** The ThinkCentre M90z's multiple screen capabilities provide the ability to compare documents side by side without the hassle of toggling back and forth. The ThinkCentre M90z meets the multitasking needs of today's enterprise customers with multiple monitor support. The use of multiple displays enables users to stay on task at a 45% better rate than when using a single monitor desktop. The all-in-one desktop can also be equipped with a multi-touch HD display panel, enhanced with SimpleTap software. These options allow businesses to customize the system to their needs. Attaching multiple screens is made possible by Lenovo's USB-to-DVI option, which enables the addition of multiple HD monitors. The ThinkCentre M90z also provides businesses with features that allow collaboration via VoIP (Voice over IP) video conferencing. The M90z incorporates a 2-megapixel-high definition Webcam as well as a built-in digital array microphone. For end user convenience, Lenovo designed the M90z with a webcam physical lock and microphone mute button, located on the

system's bezel. The camera and microphone allow end users to collaborate more effectively.



### Lenovo ThinkCentre M90z Viewing Options:

- Multiple monitor support
- Stand alone monitor option
- Multi-touch capabilities (select models)
- 45% improvement in task tracking

**Lenovo provides numerous options:** Lenovo also provides a wide variety of service and support options and accessories for the ThinkCentre M90z. Lenovo ThinkPlus Support makes Lenovo experts available to help minimize system downtime. ThinkCentre M90z accessories, such as ThinkVision monitors, along with wireless fingerprint, TrackPoint or SmartCard keyboards and a Lenovo Extend Arm mount enhance functionality of the desktop.

### Conclusion

TBR believes Lenovo's ThinkCentre M90z all-in-one desktop with the 2010 Intel Core vPro Processor Family provides a strong option for meeting the performance, efficiency and manageability needs of today's businesses. Its user-friendly functional design and layout enable end users to free more space on their desktops to add displays and do written work, thus greatly increasing productivity. Business-ready features make collaboration more convenient, while processing performance and speedy boot-up and shut-down times made possible by the Windows 7 Enhanced Experience coupled with multiscreen viewing options set the stage for increased user productivity. The latest manageability and security features help ensure the M90z stays up and running and its data protected, reducing lifetime management costs compared with previous desktop generations while increasing performance and multitasking.