Lenovo Says…

ThinkCentre M57/M57P Ultra Small Desktop PC With Greenguard Certification

Lenovo has announced the ThinkCentre M57/M57P "Eco" ultra small desktop PC, the first desktop PC from any manufacturer to receive GREENGUARD certification, and Lenovo's most environmentally responsible desktop PC to date. The ThinkCentre M57/M57P is EPEAT Gold rated, Energy Star 4.0 rated, and the first ThinkCentre with recycled material from consumer plastics.

"We are quite proud to say the ThinkCentre M57/M57P is the first desktop ever to meet our rigorous standards for chemical emissions," said Carl Smith, GREenguARD Environmental Institute CEO. "Lenovo is leading the industry in its commitment to environmentally responsible computing."

GREenguARD certification means that the ThinkCentre M57/M57P was tested for up to 2000 different chemical emissions. GREenguARD Environmental Institute has certified more than 150-thousand products and materials for emissions of volatile organic compounds and other chemicals.

IDC forecasts worldwide shipments of the ultra small form factor to grow by 37.9 percent between 2008 and 2011. So the need for "small" will apparently continue to grow. The M57P "Eco" desktop PC is 25 percent smaller than previous ThinkCentre products: smaller than a typical phone book.

The ThinkCentre M57/M57P family is comprised of the quietest running ThinkCentre offerings ever. With acoustic levels measured at 4.0 bels or lower in all modes of operation, the M57/M57P provides a consistently quiet operation. As a unit of measure, "bels" is typically used to describe the amount of noise emanating from a PC.

"In addition to environmental responsibility our business customers have demanded more manageability and lower operating costs - all in a very small design," said Fran O'Sullivan, senior vice president of products, Lenovo. "With the M57/M57P we raised the bar by developing a small, compact offering that provides the highest levels of manageability and security while operating with less power consumption and noise. This is Lenovo's most energy efficient ThinkCentre ever!"

The new ThinkCentre M57/M57P "Eco" ultra small PC features Lenovo's full suite of ThinkVantage Technologies. With the touch of a single button the user can recover from viruses, update the system, clean
Lenovo ThinkCentre M57/M57P Ultra-Small Desktop PC - greentechZONE

up the hard drive and find help. The ThinkCentre M57/M57P also comes with Intel vPro technology that enables IT staff to remotely perform system maintenance, including installing security patches and ensuring energy policy settings, even if the system is powered down or if the bios or hard drive is inoperative.

The ThinkCentre M57/M57P "Eco" also features the latest Trusted Platform Module (TPM) security chip, which uses hardware to encrypt keys, passwords and digital certificates - protecting information from an external software attack. Intel vPro technology stores system information in non-volatile memory enabling IT to quickly and easily ensure the latest versions of applications, security updates and compliance to energy policy settings. Additionally, the user gets the ability to disable/enable USB ports through BIOS, a standard chassis intrusion switch and the ability to sign up for Computrace.

"Intel vPro Processor Technology provides hardware-assisted security and manageability that significantly improves IT's ability to protect their PCs from viruses and other threats," said Zane Ball, director of microprocessor product marketing, Intel. "In addition, because IT staff can power-on systems remotely, there's no longer a need to waste energy and dollars by leaving computers on all night to install security patches and conduct other maintenance."

In addition, Lenovo announced its new ThinkCentre Vertical PC and Monitor Stand, which allows the user to lift the ThinkCentre M57/M57P off the desk, freeing up even more workspace. The VPC stand uses an industry standard Video Electronic Standards Associations (VESA) mount to accommodate various sized monitors. It allows the user to lift, tilt and rotate the monitor, as well as secure the M57P and the monitor to the stand.

Lenovo also today announced additional ThinkCentre models: The M57e, a high-performance, value desktop PC for large businesses; and the A57 PC, a rock solid desktop designed for small and medium businesses. Both include some of the latest technologies, including Intel 45nm processors, Intel Quad Core technology and Direct X10 graphic cards. The ThinkCentre M57e offers stable solutions, outstanding security, and manageability features for PC management; while the ThinkCentre A57’s latest ThinkVantage Technology suite and dual independent display capabilities are designed to help growing businesses increase their working efficiency and productivity. Both ThinkCentre desktop families offer three form factors: tower, desktop and small form factor, and are Energy Star 4.0 compliant.

EN-Genius Says…

When eco-computers arrived on the scene a couple of years ago, it was pretty clear that most manufacturers were having a hard time re-directing a manufacturing culture that had placed cost and performance above all other factors for the past 20 years to factor in things like energy management, recyclability, elimination of hazardous materials, and extended product life. By the time I reviewed Lenovo A61e eco-desktop computer back in November of 2007, there were lots of big and small features that had been quietly tucked into the unit indicating that they'd learned many lessons about integrating environmental factors into their designs in a cost-effective manner. The result is a nicely-rounded machine that would be at home in nearly any enterprise environment where manageability and environmental performance are priorities.

A Quick Test Drive

My last review concentrated solely on the eco-design aspects of the computer so I thought that it might be nice to include some hands-on user impressions this time. To satisfy my curiosity, Lenovo was kind enough to loan me an M57 for a few weeks. The loan also included the ThinkVision L74, their latest low-power flat-panel monitor which recently earned full EPEAT Gold certification. Drawing a bit less than 15 W in typical
applications (around 19 W maximum), the L74 delivers an attractive, low-latency image while using a third less power than Lenovo’s earlier low-power display, the L71. Unfortunately, the computer and display were so attractive that my daughter found the them much cuter than the putty-colored box and CRT she normally uses and quickly appropriated the loaner units as her own for the duration. After fussing a bit, I realized that she’d be as good a test of the machine’s general capabilities as I would and let her abuse it to her heart’s content.

Although the M57 handled my daughter’s homework, web browsing, music videos, and other digital teen tasks quite well, I realized this did not really test the machine’s full capabilities. Since my hobbies don’t include video editing or amateur computational fluid dynamics, the next best option to really exercise the unit was to download and run Futuremark PCMark05 benchmarking software. The 4568 PCMark score it received was not the sort of figure you’d look for if you were shopping for a gaming PC or expecting to do lots of CAD work, but it is certainly more than enough for any office application I can imagine.

After spending a week with the M57 and its companion L74 display, perhaps the most remarkable thing that can be said about them is that they are completely unremarkable except for their exceptionally low power consumption and environmentally-friendly design. It’s handled everything we’ve thrown at it without a hiccup and we’ve both come to love the tiny footprint it takes up on my daughter’s desk. We’ll both miss it when it heads back to Lenovo in a few weeks.

A Look Inside

Although it shares many components with the A61 (including the entire case and chassis), the M57 adds several important manageability features; the use of some post-consumer recycled materials, and some much-needed additional processing power to the lower-priced A61 basic platform. The performance boost comes from swapping out the A61 AMD Sempron/Athlon processors for a beefier Intel Duo chip. Although the base model packs enough features to satisfy most applications, you have the option of specifying Intel VPro chip sets that provide enterprise-level security and manageability. In addition, the M57P sports both a VGA and DVI video port, allowing it to support dual screens (a big deal in call centers and most financial operations).
The M57 consumes less energy than its predecessor, despite the fact that it delivers significantly more compute power. The new processors, plus a series of tweaks to the design and power management software have moved idle power down to 30 W – 35 W and 65 W, or less, at full tilt (the M61e draws 65 W – 75 W operating and 40 W – 45 W at idle). One of the tricks Lenovo used to achieve these near-laptop power levels is their ultra-efficient (85% - 88%) external brick power supply. Unlike the general-purpose supplies found in most computers that must cope with a wide range of loads, it was custom-designed to deliver maximum efficiency around the computer power levels. Moving the supply outside the main box also allowed for a smaller footprint and helped reduce its cooling requirements, allowing the use of a smaller, quieter cooling fan.

Equally important, Lenovo spent lots of time talking with its customers to understand what they needed in terms of performance and management features. This allowed them to ship their units with a feature set and a standard factory configuration that was close enough to what most MIS departments need that they don’t have to make major changes that could possibly disable some of the computer energy-saving features.

As the release mentions, the M57 is the first consumer PC to feature a case skin that includes a bit over 10% post-consumer recycled plastic. The new case panels are interchangeable with the A61 but add material recycled from the consumer waste stream to the earlier mix of virgin ABS-type material and post-industrial scrap that was recovered during the manufacturing process.

While this might seem like a minor change, Lenovo says that helping their vendors work out the logistics of supplying a steady stream of recycled materials with consistent quality was a big challenge. They used their experience with using post-industrial materials in some of their server cases to get production started with the A61e before phasing in post-consumer material into the manufacturing system. Although re-engineering its plastics supply chain was a major effort it could pay big environmental and economic dividends in the future. So far, the Eco model is the only one with post-consumer plastic for the moment but this should change as confidence grows.

The big and small improvements throughout the M57e reflect a real commitment to designing products with minimal environmental impact. Since Lenovo has concentrated its efforts on a high-volume product line it’s a pretty good bet that this is not simply a public relations exercise and that the lessons learned here will eventually infiltrate most, or all of the company’s future designs.

The ThinkCentre M57/M57p eco USFF ultra small desktop PC is priced starting at $844. The ThinkCentre M57 Eco ultra small desktop PC is priced starting at $699. The M57e starts at $684. The base price for the A57 is $379. The Vertical PC Stand is priced at $69.95. Monitors are sold separately with the ThinkVision L74 retail priced at $239.