



REDEFINING 'ULTIMATE'

Built just five months later,
the newest Ultimate PC
outshines its predecessor

BY JOHN YACONO

To highlight the most innovative system components currently available to the channel, the *CRN* Test Center last week assembled a PC of its own design, the latest Ultimate PC.

Using best-of-breed components, *CRN* Lab Director John Yacono built the system before an audience of systems builders and component vendors at the Tech Builder Xchange conference in Coronado, Calif. The components selected for the PC balanced excellence in innovation, functionality and performance. This year's Ultimate PC includes a 2.53GHz Intel Pentium 4 processor with a 533MHz front-side bus, 2 Gbytes of 800MHz 40-nanosecond RDRAM, three hard drives and a built-in UPS. A Cooler Master case (customized by systems builder Voodoo Computers to include internal lighting), a glass-view side panel and a high-gloss paint job added a sports-car appearance.

The subsystems in this Ultimate PC represented a marked improvement over those used in the previous Ultimate PC just five months ago. For example, the effective processor speed jumped by 50 percent from generation to generation. The decision to move from 100BaseT technology to Gigabit Ethernet also boosted network performance in this year's system.

On the storage side, the Ultimate PC's DVD-RW/CD-RW drive can record on DVD-R media, a task that first-generation DVD-RW/CD-RW drives couldn't perform.

The Ultimate PC's video card features FireWire support for video capture and remote control of audio/visual devices. The video system also included a radio-frequency (RF) remote that could replace the mouse for presentations and all other action-at-a-distance applications. The upgraded flat-panel display added a TV tuner and dual component-video inputs to the 24-inch HDTV-capable flat panel used in last year's system.

The native cooling capacity of the cabinet was so effective in this year's model that the Test Center chose not to install additional cooling systems, even though an additional hard drive was used.



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SPEAKER SYSTEM

(pictured on opposite page)

641 4.1 Digital Speaker System
Price: \$199 MSRP, \$199 street
Altec Lansing
(570) 296-4434, (866) 570-5702
www.alteclansing.com

Producing thunderous yet accurate sound, the 641 4.1 Digital Speaker System is powerful enough to fill even a large room with rich audio. The bundle includes a digital wired remote control (hence the "digital" appellation) and sports analog front and rear stereo inputs.



DISPLAY

(pictured on opposite page)

SyncMaster 241MP
Price: \$6,999 street
Samsung Electronics America
(949) 975-7000, (800) SAMSUNG
www.samsungusa.com

We're not sure if it's a high-definition flat panel in a TV or an HDTV in a flat panel, but we're positive Samsung's SyncMaster 241MP is the ultimate presentation powerhouse. The 24-inch 16:9 ratio display features a built-in cable TV tuner, an infrared remote, two component-video inputs, S-video and composite-video inputs, multiple audio inputs, speakers and picture-in-picture capability.



KEYBOARD AND MOUSE

(pictured on opposite page)

Cordless Freedom Optical
Price: \$100 MSRP, \$100 street
Logitech
(510) 795-8500, (800) 231-7717
www.logitech.com

The keyboard and mouse, selected on their individual merits, are sold together as part of a Logitech Cordless Freedom Optical bundle. The keyboard is a wireless device with useful multimedia and other function keys and control wheels. The Cordless MouseMan Optical mouse provides excellent ergonomics, two extra buttons and a scroll wheel.



SYSTEM CABINET

ATC-110-SX1
Price: \$325 MSRP
Cooler Master
(510) 770-8566
www.coolermaster.com

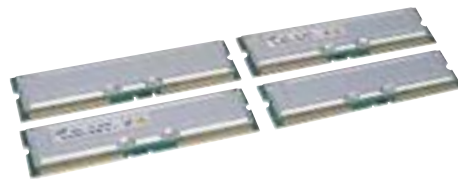
The system cabinet from Cooler Master keeps the Ultimate PC cool via its aluminum mass and numerous fans, two of which drive air across the hard drives. For easy assembly and repairs, the motherboard and adapter cards can be assembled on a palate/back-panel subchassis outside the cabinet and inserted into the main chassis at once. The cabinet was customized with lighting, a clear side panel and a sports-car paint job by systems builder Voodoo Computers.



HARD DISK/PERFORMANCE

Cheetah X15-36LP
Price: \$700 MSRP, \$425 street
Seagate Technology
(831) 438-6550, (877) 271-3285
www.seagate.com

The 15K RPM, 36-Gbyte Cheetah drive delivers excellent performance for everything from streamed to multithreaded data access. The drive has a next-generation 320-Mbps interface that will allow it to offer better performance when faster SCSI host-bus adapters arrive. The drive tied the Fujitsu MAM 15K RPM, 18-Gbyte unit in performance.



HARD DISK/PERFORMANCE

MAM Series 15K RPM 18GB
Price: \$399 MSRP, \$325 street
Fujitsu Computer Products of America
(408) 432-6333, (800) 626-4686
www.fcpa.fujitsu.com

Fujitsu's 15K RPM, 18-Gbyte drive with a 320-Mbps interface offers outstanding performance. The drive earned excellent marks under all 11 scenarios that the Test Center considers, making the unit suitable for everything from database access to video editing. The drive tied the Cheetah X15-36LP in performance.



CD DRIVE

CenDyne DVD-R/RW Drive, Model No. DVR-104
Price: \$499 MSRP, \$499 street
CenDyne
(714) 556-1020
www.cendyne.com

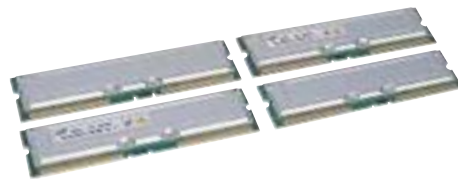
Based on a Pioneer drive, the CenDyne bundle can write on CD-R/RW media and DVD-R/RW media. Earlier drives in this class couldn't write on DVD-R media even though they were DVD-RW-capable, making this new generation more suitable for DVD mastering.



MEMORY MODULES

512-Mbyte RDRAM PC800-40 Modules
Price: \$250 MSRP
Samsung Electronics
(408) 544-4000
www.samsungelectronics.com

The first 40-nanosecond memory modules on the market, Samsung's 512-Mbyte PC800 units were a no-brainer when it came to building the Ultimate PC. The higher-speed modules take full advantage of the processor and motherboard's new 533MHz front-side bus.



MOTHERBOARD

Intel Desktop Board D850EMV2
Price: \$150 street
Intel
(408) 765-8080, (800) 538-3373
www.intel.com

The only motherboard available that supports the new Pentium 4's 533MHz front-side bus, the Intel D850EMV2 delivers superior performance in a PC platform. Highlights include a redesigned hub chip for greater performance, USB 2.0 support, a sound subsystem and a front-panel USB connector. >>





NETWORK-INTERFACE CARD

DGE-500T 32-bit Gigabit-over-copper adapter
Price: \$60 MSRP, \$45 street
D-Link Systems
(949) 788-0805, (800) 326-1688
www.dlink.com

This first Gigabit Ethernet-capable card used in the Ultimate PC delivers network data-transfer rates limited by a computer's hard drive or PCI-bus speed instead of the network, the Test Center found. The card autonegotiates to 100BaseT—or 10BaseT, if needed—and supports autonegotiated half- and full-duplex operation at all speeds. For troubleshooting, the NIC has six indicators.



POWER SUPPLY

APT-X400
Price: \$299 MSRP, \$249 street
American Advanced Power
(401) 454-5335, (401) 454-5335
www.ups2.com

An improvement over typical PC power supplies, the APT-X400 is a combination power source and UPS that fits inside the system cabinet. If power fails, the unit keeps the PC and monitor alive until a safe automatic shutdown is completed.



PROCESSOR

2.53GHz Intel Pentium 4 processor
Price: \$637 MSRP
Intel
(408) 765-8080, (800) 538-3373
www.intel.com

The fastest processor available according to numerous Test Center performance tests, the 2.53GHz Pentium 4 processor boasts a new 533MHz front-side bus, boosting performance and scalability of the platform as processor clock speeds continue to rise.



SCSI HBA

Adaptec SCSI Card 29160N
Price: \$349 MSRP, \$329 street
Adaptec
(408) 957-7274, (800) 442-7274
www.adaptec.com

A staple of the Test Center's test fixtures, Adaptec SCSI cards have a proven track record of stability and compatibility. The 29160N pumps information at a data-thrashing 160 MBps. Value-added software assists with drive preparation, diagnostics, CD-R creation and system backups.



SOUND SYSTEM

Sound Blaster Audigy Platinum eX
Price: \$250 MSRP, \$250 street
Creative Labs
(408) 428-6600
www.americas.creative.com

With 24-bit multichannel sound processing at an incredible 100dB signal-to-noise ratio and FireWire support, the Audigy has raised the bar on PC audio. The eX version includes an external connection box (for MIDI, digital and analog audio) plus infrared remote-control and FireWire support.



HARD DISK/CAPACITY

Barracuda 180
Price: \$1,800 MSRP, \$1,350 street
Seagate Technology
(831) 438-6550, (877) 271-3285
www.seagate.com

With the highest storage capacity of any hard drive now available, the Barracuda 180-Gbyte SCSI drive was a must-have for the Ultimate PC. Beyond its raw capacity, the drive is also one of the better performers on the market.



FLOPPY DRIVE

D359M3D 1.44 Floppy Disk Drive
Price: \$20 MSRP, \$20 street
Mitsumi Electronics
(972) 550-7300, (800) MITSUMI
www.mitsumi.com

In all of the systems evaluated by Test Center engineers, a Mitsumi floppy drive has never failed. Because of such reliability, Mitsumi drives are standard in the Test Center's test beds, as well as in the Ultimate PC.



VALUE-ADDED COMPONENT

Addonics Internal DigiDrive
Price: \$69 MSRP, \$69 street
Addonics Technologies
(408) 433-3899, (800) 787-8580
www.addonics.com

Memory readers are a value-add the Test Center has seen more and more on white-box systems recently. The Internal DigiDrive can read from all available form factors of portable memory, including compact Flash I and II, Memory Stick, Smart Media, Secure Digital Card, Multimedia Card and Micro Drive.



VIDEO SYSTEM

All-In-Wonder Radeon 8500DV
Price: \$399 MSRP
ATI Technologies
(905) 882-2600
www.ati.com

The Radeon 8500DV and its bundled software are more than a video solution—they are video-production and data-gathering tools. Features include FireWire, broadcast cable and other inputs; live-video pause; closed-caption recording; and video capture (manual, timed or caption-keyword triggering). The RF remote can operate any program, since it also acts as a mouse.