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THE LENOVO® THINKSTATION® C20 WORKSTATION

UNPARALLELED PERFORMANCE. UNPRECEDENTED SIZE.

GENUINE WINDOWS® 7 PROFESSIONAL

ENVIRONMENTAL CHAMPION OF ITS CLASS WITH AN 80 PLUS GOLD POWER SUPPLY AND RECYCLED PLASTICS USAGE

UP TO 12 DIMM SLOTS, DELIVERING UNMATCHED MEMORY CAPACITY

ISV CERTIFIED FOR OPTIMIZED PERFORMANCE AND RELIABILITY

SUPERIOR GRAPHICS PERFORMANCE WITH INTEL® HD GRAPHICS, NVIDIA® QUADRO® AND NVS GRAPHICS.

QUICK AND EASY TOOL-LESS MAINTENANCE AND UPGRADES

WORLD'S SMALLEST[1] DUAL-CPU WORKSTATION, FEATURING INTEL® XEON® 5600 SERIES PROCESSORS

Lenovo delivers the ThinkStation C20 and C20x, compact, premium workstations for businesses that have space-constraints and require dual-CPU horsepower. Available in two models, the ThinkStation C20 and C20x offer traditional and compact dual-CPU workstation performance in an unprecedented form factor. They are a true testament to Lenovo's exceptional engineering, achieving what many thought to be an "impossible design".

The ISV-certified ThinkStation C20 and C20x are engineered to be the world's smallest dual-CPU workstations with no-compromise performance. The ThinkStation C20 and C20x are also the perfect choice for businesses that require a smaller, easy-to-manage workstation and maintain dual-CPU performance.

These workstations allow professionals to fit more number-crunching capabilities in less space, as compared to traditional and compact dual-CPU workstation solutions. For example, a standard 42U rack traditionally fits up to 10 compact workstations, but with the ThinkStation C20 or C20x customers can now install up to 14 systems.

Powered by Intel® Xeon® 5600 series processors, the ThinkStation C20 and C20x significantly improve performance and productivity as against prior-generation technology. These enterprise-class processors offer Turbo Boost Technology, which can intelligently adjust the CPU's performance and power usage, depending on the user's workload. The ThinkStation C20 and C20x also come with Error Correcting Codes (ECC) memory, providing greater data accuracy, improving system uptime and protecting against memory errors. For leading-edge graphics, Lenovo has partnered with NVIDIA® to bring you the latest in professional workstation graphics adapters, yielding superior application performance and stability.

A tool-less interior enables quick and easy maintenance and upgrades of key components, without ever having to reach for a screwdriver. Front-access media ports with illuminated I/O icons allow you to easily connect devices to the right I/O ports, even in dark environments. The recessed power button design prevents accidental shutdowns that can potentially cost users, hours of their hard work.

Windows 7 / lenovo ENHANCED EXPERIENCE

LENOVO ENHANCED EXPERIENCE FOR WINDOWS® 7.
FAST. SECURE. BUILT FOR BUSINESS.

Discover a better way of doing business with the new Lenovo Enhanced Experience for Windows® 7 on Think PCs. Faster, more durable and greener Think PCs are optimized for Windows® 7 to deliver improved ease of use. It enhances productivity and foolproof security that your business cannot do without.

intel inside™ Xeon®

Powerful. Intelligent.

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PRODUCTIVITY ACCESSORIES

Ergotron DS 100 Quad Monitor (2x2) Desk Stand - 30R6971

- View multiple monitors simultaneously for maximum productivity
- Accomodates various LCD sizes and slides displays into place so screen edges align

Ergotron DS 100 Dual Monitor Stand - 30R6969

- View multiple monitors simultaneously for maximum productivity
- Accomodates various LCD sizes and slides displays into place so screen edges align

ThinkCentre Extend Arm - 57Y4352

- Extend function (410mm, 16.1") to easily move and adjust the monitor
- 269mm (10.6") vertical adjustment
- Pivot for portrait (vertical) and landscape (horizontal) viewing
- Tilt to reduce glare and improve viewing angle

3D Connexion Space Navigator Standard Edition - 41A2545

- Six degrees of freedom via a flexible controller cap
- Support for Google Earth Google SketchUp Autodesk DWF Viewer as well as 3D design applications from Solidworks, PTC, UGS, Dassault Systemes and Autodesk

COMPACT DESIGN. NO COMPROMISE ON PERFORMANCE

- Intel® Xeon® 5600 series processors with Turbo Boost Technology, offering up to 24 threads.
- Genuine Windows® 7 Professional 64-bit
- with preloaded Lenovo Enhanced Experience
- ECC memory – supports up to 192GB 1333MHz DDR3
- Partnered with NVIDIA® for Professional-grade workstation graphics solutions.
- Tri-channel cooling[3] – offers cooler components and higher reliability.

ISV CERTIFIED RELIABILITY

- The ThinkStation C20 is certified by multiple leading ISVs, ensuring maximum performance and reliability.
- The certification also allows support from ISVs if software operational issues occur.
- The ISV certifications on the ThinkStation C20 include applications from Autodesk, Adobe, Dassault Systemes, PTC and Siemens.

BETTER MANAGEABILITY AND GREATER SECURITY

- Intel® vPro™ with AMT 7 provides the features of Intel® Standard Manageability.
- Error Correcting Code (ECC) memory, to virtually eliminate memory failures.
- Tool-less interior enables quick and easy maintenance and upgrades of key components.
- Front-access media ports with illuminated I/O icons allow you to easily connect devices to the right I/O ports, even in dark environments.
- The recessed power button design prevents accidental shutdowns that can potentially cost users, hours of their hard work.

ECO-FRIENDLY WORKSTATION

- Recycled Plastic Usage featuring Post Consumer Content (PCC).
- 80 Plus Gold-certified power supply with 90% efficiency.
- GREENGUARD certification to preserve indoor air quality with low chemical and particle emissions.
- EPEAT Gold certification, for lower toxic material, greenhouse gas emissions, and electricity consumption.
- TCO certification, indicating low noise and radiation levels, and minimal environmental impact.

1 Among tier 1 OEMs (Dell, HP and Lenovo), Dell is 46% and HP is 31% volumetrically larger. Further, Lenovo can fit 14 systems in a 42U rack unlike Dell and HP which can fit only 10 systems.
2 The ThinkStation C20x supports 130W CPUs (HP does not), Tesla™ (HP does not), up to 12 DIMMs (HP has 6 while Dell has 9), 3 HDD bays (HP has 2), up to 2 FX4800 class graphics – 300W (HP support up to 1 FX4800 class – 150W)
3 Patent pending
4 Availability pending for 16GB DIMMs

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OPTIONS AND ACCESSORIES

PROFESSIONAL GRAPHICS CARDS

Lenovo DisplayPort cable is DisplayPort1.2 compliant to provide upto 4k x 2k resolution. Get Lenovo DisplayPort Cable **(0A36537)** with NVS / Quadro graphics cards and Lenovo LT LED Monitors.

NVIDIA NVS 295 Dual DisplayPort Graphics Card (45K1669)
- Dual DisplayPort supports 2560 x 1600 resolution
- Fan-less design and quieter operation
- NVIEW Display Management software
- Supports attachment of optional DisplayPort cables /adapters

NVIDIA NVS 300 Dual Digital, Dual Analog Graphics Card (0A36528)
- DMS59 interface supports dual digital, dual analog capability
- Fan-less design and quieter operation
- NVIEW and Mosaic Display Management software
- Supports attachment of optional DisplayPort cables /adapters

NVIDIA NVS 450 Quad DisplayPort, Quad DVI Graphics Card (57Y4398)
- Quad DisplayPort supports 2560 x 1600 resolution
- Includes four DisplayPort to Single-link DVI-D monitor cables to connect DVI monitors
- NVIEW Display Management software
- Supports attachment of optional DisplayPort cables / adapters

NVIDIA Quadro 400 DisplayPort, DVI Graphics Card (0A36535)
- Each DisplayPort and Dual-link DVI-I supporting upto 2560 x 1600 @ 60Hz or 1920 x 1200 @120Hz
- Energy efficient 3D CAD performance with a flexible form factor
- Supports attachment of optional DisplayPort cables / adapters

NVIDIA Quadro 600 DisplayPort, DVI-I 1GB Graphics Card (0A36183)
- DisplayPort and Dual-link DVI each supporting maximum resolution of 2560x1600
- Energy efficient 1GB performance with flexible form factor
- Supports attachment of optional DisplayPort cables / adapters

NVIDIA Quadro 2000 Dual DisplayPort, Dual-link DVI 1GB Graphics Card (57Y4479)
- Three monitor ports: use any two of three ports
- DisplayPort and Dual-link DVI each supporting maximum resolution of 2560x1600
- Supports attachment of optional DisplayPort cables / adapters

NVIDIA Quadro 4000 Dual DisplayPort, Dual-link DVI 2GB Graphics Card (57Y4480)
- Three monitor ports: use any two of three ports
- DisplayPort and Dual-link DVI each supporting maximum resolution of 2560x1600
- Supports attachment of optional DisplayPort cables / adapters

NVIDIA Quadro 5000 Dual DisplayPort, Dual-link DVI 2.5GB Graphics Card (57Y4481)
- Three monitor ports: use any two of three ports
- DisplayPort and Dual-link DVI each supporting maximum resolution of 2560x1600
- Supports attachment of optional DisplayPort cables / adapters

WORKSTATION STORAGE

Lenovo 250GB 7200 rpm Serial ATA Hard Drive – **41N3015**
Lenovo 500GB 7200 rpm Serial ATA Hard Drive – **43R1990**
Lenovo 1TB 7200 rpm Serial ATA Hard Drive – **45J7918**
Lenovo 300GB 10K rpm Serial ATA Hard Drive – **43R2031**
ThinkStation 450GB 15K rpm SAS Hard Drive – **43N3424**

WORKSTATION MEMORY

Cost effective way to boost overall system performance

ECC UDIMM
2GB PC3-10600 DDR3-1333 ECC UDIMM – **43R2033**
4GB PC3-10600 DDR3-1333 ECC UDIMM – **57Y4138**

RDIMM
2GB PC3-10600 DDR3-1333 ECC RDIMM – **57Y4425**
4GB PC3-10600 DDR3-1333 ECC RDIMM – **57Y4426**
8GB PC3-10600 DDR3-1333 ECC RDIMM – **57Y4427**

PROCESSORS AND HEATSINKS

Intel® Xeon® Processors
Intel® Xeon® Processor E5606 (8M Cache, 2.13 GHz, 4.80 GT/s Intel® QPI) - **0A36531**
Intel® Xeon® Processor E5607(8M Cache, 2.26 GHz, 4.80 GT/s Intel® QPI) - **0A36532**
Intel® Xeon® Processor E5645 (12M Cache, 2.40 GHz, 5.86 GT/s Intel® QPI) - **0A36533**
Intel® Xeon® Processor E5649 (12M Cache, 2.53 GHz, 5.86 GT/s Intel® QPI) - **0A36534**

Heatsink for second processor-**0A65720**-Avalible from January 2012 onwards

LED MONITORS

Lenovo ThinkVision LT2452p 24" LED Monitor (4420MB2)
- Wide viewing angle with native resolution of 1920 x 1200; 16:10 Aspect ratio; 7ms response time
- Multiple input options – DisplayPort, DVI-D and VGA
- ENERGY STAR 5.1 compliant, EPEAT Gold/ULE Gold, and TCO certified Edge 1.1

Lenovo ThinkVision LT2252p 22" LED Monitor (2572MB6)
- Wide viewing angle with native resolution of 1680 x 1050; 16:10 Aspect ratio; 5ms response time
- Multiple input options – DisplayPort, DVI-D and VGA
- ENERGY STAR 5.1 compliant, TCO certified Edge 1.1, and Mercury/Arsenic free glass

Lenovo ThinkVision LT1952p 19" LED Monitor (2448MB6)
- Wide viewing angle with native resolution of 1440 x 900; 16:10 Aspect ratio; 5ms response time
- Multiple input options – DisplayPort, DVI-D and VGA
- ENERGY STAR 5.1 compliant, TCO certified Edge 1.1, and Mercury free glass

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SPECIFICATIONS

DESCRIPTION	C20	C20x
OPERATING SYSTEM	Preloaded: Genuine Windows® 7 Professional 64 bit Supported: Genuine Windows® 7 Ultimate 32 bit Genuine Windows® 7 Ultimate 64 bit Genuine Windows® 7 Professional 32 bit Genuine Windows® XP Professional 64 bit Genuine Windows® XP Professional 32 bit	Preloaded: Genuine Windows® 7 Professional 64 bit Supported: Genuine Windows® 7 Ultimate 32 bit Genuine Windows® 7 Ultimate 64 bit Genuine Windows® 7 Professional 32 bit Genuine Windows® XP Professional 64 bit Genuine Windows® XP Professional 32 bit
CPU SUPPORT	Intel Xeon E5600 - 4 Core Intel Xeon E5600 - 6 Core Intel Xeon X5600 - 4 Core Intel Xeon X5600 - 6 Core	Intel Xeon X5600 - 4 Core Intel Xeon X5600 - 6 Core
CHIPSET	Intel 5520 - Modified	Intel 5520
MAX MEMORY (GB)	96	192
ECC MEMORY SUPPORT	Yes	Yes
OPTICAL TYPES SUPPORTED	DVD-ROM DVD-RW Blu-ray Disc Burner	DVD-ROM DVD-RW Blu-ray Disc Burner
MAX 7200RPM HDD CAPACITY (GB)	3000	3000
MAX 10K RPM HDD CAPACITY (GB)	900	900
MAX 15K RPM HDD CAPACITY (GB)	Not Available	1350
MAX SSD HDD CAPACITY (GB)	768	768
POWER SUPPLY	800W 90% Efficient	800W 90% Efficient
SUPPORTED GRAPHICS ADAPTERS	NVIDIA NVS295 NVIDIA NVS300 NVIDIA NVS450 NVIDIA Quadro 400 NVIDIA Quadro 600 NVIDIA Quadro 2000, 2000D NVIDIA Quadro 4000 NVIDIA Quadro 5000 NVIDIA Tesla C2050	NVIDIA NVS295 NVIDIA NVS300 NVIDIA NVS450 NVIDIA Quadro 400 NVIDIA Quadro 600 NVIDIA Quadro 2000, 2000D NVIDIA Quadro 4000 NVIDIA Quadro 5000 NVIDIA Tesla C2050
MAX # SUPPORTED MONITORS	8	8
ISV CERTIFIED?	Yes	Yes
RACK IMPLEMENTATION	via Rail Kit	via Rail Kit

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