



SISTEMI PROFESSIONALI PER UTENTI AVANZATI



Le workstation di fascia intermedia ThinkStation serie P5 offrono un'ampia scelta di schede grafiche professionali, insieme a funzionalità di storage ed espansione.

ThinkStation P520

Smarter
technology
for all

Lenovo

La nostra workstation a singola CPU più potente si basa sul processore Intel Xeon® serie W. Il sistema di raffreddamento a tre canali separa l'aria tra 3 aree all'interno della macchina, migliorando le prestazioni di raffreddamento, in modo da poter configurare fino a 2 schede grafiche NVIDIA Quadro® RTX 4000 or Quadro GP100 in questo dispositivo 33L relativamente compatto. La tecnologia Flex Tray, con vani di storage anteriori, consente di utilizzare un'ampia gamma di opzioni di storage, supporti multimediali o porte di connettività.



MOTIVI PER L'ACQUISTO

Lenovo PC Diagnostics permette alla workstation di comunicare direttamente con il tuo dispositivo mobile nei casi in cui il sistema non si avvia o non si accende. Questa applicazione offre diagnostica istantanea e possibili soluzioni.

Certificazione o uso consigliato con Adobe After Effects, Adobe Photoshop, Adobe Premiere Pro

Con la giusta configurazione di processori multicore e memoria ECC priva di errori, è possibile gestire carichi di lavoro di analisi dei dati complessi.



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ThinkStation P520

SPECIFICAZIONI

Processore	up to 165W Intel Xeon W processor
Sistema operativo	Powered by Windows 10 Pro for Workstations
Grafica massima	up to 1x NVIDIA Quadro RTX 8000 or Quadro GV100, or 2x NVIDIA Quadro RTX 4000 or Quadro GP 100
Memoria	up to 512GB (with 8x 64GB DDR4-2933 RDIMMs)
Max Storage Drives	Internal storage: 60TB (6x 10TB 3.5"" SATA HDD) or 12TB (6x 2TB 2.5"" SATA SSD) or 3TB (6x 500GB 2.5"" SATA HDD) or 2.4TB (4x 600GB 2.5"" SAS HDD) M.2 SSD: 18TB (9x 2TB M.2 PCIe NVMe SSD - 2 onboard & 7 via PCIe to M.2 adapter) <i>Overall storage capacity depends on mix of Internal, M.2, PCIe cards and other options installed</i>
Tipi di archiviazione supportati	3.5"" SATA HDD 6Gb/s 7.2k RPM up to 10TB 2.5"" SATA HDD 6GB/s 7.2k RPM up to 500GB FIPS 2.5"" SAS HDD 12GB/s 10k RPM up to 600GB 2.5"" SATA SSD 6GB/s up to 2TB M.2 PCIe NVMe SSD up to 2TB Add-in Card: PCIe NVMe SSD up to 480GB RAID 0/1/10/5/6 supported
Controller di archiviazione	<i>Controller HDD</i> Broadcom 9440-8i SATA/SAS PCIe Adapter Broadcom 9460-16i SATA/SAS PCIe Adapter Onboard Intel RSTe SATA <i>Controller SSD M.2</i> RAID 0/1 RAID 0/1/10 Upgrade RAID 0/1/10/5 Upgrade RAID 0/1/10/5 Upgrade for Intel SSD
Ottico	optional up to 2x DVD burner drives
Pannello diagnostico	Front 4-Digit Diagnostic LED (opzionale)
Alimentazione elettrica	<i>Uno dei seguenti</i> 1000W Platinum Fixed 690W Platinum Fixed 900W Platinum Fixed
Dimensioni	Width: 165mm (6.5"") Depth: 460mm (18.1"") Height (with feet): 440mm (17.3"")
Peso	Maximum configuration: 24kg (52.91lb)

CERTIFICAZIONI ECOLOGICHE

GREENGUARD. EPEAT Silver rating. ENERGY STAR 6.1 qualified on select models. 80 PLUS Platinum (690W & 900W PSU)

Le informazioni qui presentate possono rappresentare le configurazioni massime possibili per questo prodotto, ma non corrispondono necessariamente a quelle disponibili nella tua area geografica. Chiedi al tuo rappresentante o verifica le specifiche per numeri parte specifici nella tua area geografica. ©2020 Lenovo. Tutti i diritti sono riservati. Questi prodotti sono disponibili fino a esaurimento delle scorte. Lenovo non è responsabile di eventuali inesattezze delle immagini o di errori tipografici. Lenovo, il logo Lenovo, ThinkPad, ThinkCentre, ThinkStation e ThinkVision sono marchi o marchi registrati di Lenovo. I nomi di prodotti e servizi di terze parti possono essere marchi di terzi. A seconda di vari fattori, quali la capacità di elaborazione delle periferiche, gli attributi file, la configurazione del sistema e gli ambienti operativi, l'effettiva velocità di trasferimento dei dati dei connettori USB varia e in genere è inferiore agli standard pubblicati.

CONNETTIVITÀ

I/O anteriore	4x USB 3.1 Gen 1 (includes 1x 11W charging), 1x combo audio/microphone jack (3.5mm)
I/O posteriore	2x USB 2.0, 4x USB 3.1 Gen 1, 1x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2
Porte frontali opzionali	<i>Uno dei seguenti</i> 1x USB-C 1x eSATA 1x eSATA + 2x Thunderbolt 2x Thunderbolt 2x Thunderbolt + 1x USB-C
Porte posteriori opzionali	<i>Uno dei seguenti</i> 1x Serial 1x Serial + 2x USB-C 2x USB-C
Porte interne opzionali	1x USB 3.0
WLAN + Bluetooth	Intel 8265 11ac, 2x2 + BT4.2

SICUREZZA E PRIVACY

Lock Kit with Common Key
Lock Kit with Unique Key
Access Panel Lock (optional)
Kensington lock slot
Padlock slot
TPM 2.0

GESTIBILITÀ REMOTA

Intel vPro with AMT 11, DASH

CERTIFICAZIONI ISV

ALLPLAN, ANSYS, AVEVA Hull e AVEVA Outfitting, AVEVA Hull, Outfitting, BOCAD, Everything 3D e PDMS, AVEVA PDMS, Adobe After Effects, Adobe Photoshop, Adobe Premiere Pro, Altair HyperWorks, Autodesk Alias, Autodesk AutoCAD, Autodesk Inventor, Autodesk Maya, Autodesk Revit, Autodesk VRED, Avid Media Composer, Bentley MicroStation V8i, CONNECT Edition, LumenRT, DS (CATIA, DELMIA, ENOVIA), DS 3DEXPERIENCE, DS ICEM Surf, DS SOLIDWORKS, Esri ArcGIS Desktop, FujiFilmSynapse, GE Healthcare Centricity Solutions per l'imaging aziendale, Monitor medicali Barco, PTC Creo, Phillips Enterprise Imaging (IntelliSpacePACS), Sectra Enterprise Imaging, Siemens NX, TcVis, Tecnomatix, Siemens Solid Edge, Soluzioni PACS Siemens, Vectorworks, Vital Enterprise Imaging

Consigliato per questo dispositivo



ThinkVision P27u-10

Monitor 4K (3840 x 2160) da 68,58 cm (27") con vasta gamma di colori (>99% Adobe RGB, 97% DCI-P3)

2 HDMI, 1 DisplayPort, 1 USB-C, 4 USB 3.0, 1 USB 3.0 Type-B upstream

Sollevamento, inclinazione e rotazione verticale e orizzontale per il massimo comfort visivo



Mouse e tastiera wireless Lenovo Professional

Set mouse e tastiera wireless con connessione wireless a 2,4 GHz affidabile

Tastiera sottile con tastierino numerico, design con tecnologia di eliminazione del rumore, controlli multimediali dedicati e piedini con inclinazione regolabile

Il design sagomato del mouse è perfetto per l'uso con la mano destra e quella sinistra



Assistenza on-site

Se un problema non può essere risolto da remoto, ci reheremo presso la tua sede

Servizio con risposta in genere entro un giorno lavorativo

Appuntamenti con orari concordati

PERFORMANCE

Processor

Processor Family

Up to one Intel® Xeon® W-2200 / W-2100 series processor

Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Xeon W-2102	4	4	2.9GHz	-	8.25MB	DDR4-2400	-
Xeon W-2104	4	4	3.2GHz	-	8.25MB	DDR4-2400	-
Xeon W-2123	4	8	3.6GHz	3.9GHz	8.25MB	DDR4-2666	-
Xeon W-2125	4	8	4.0GHz	4.5GHz	8.25MB	DDR4-2666	-
Xeon W-2133	6	12	3.6GHz	3.9GHz	8.25MB	DDR4-2666	-
Xeon W-2135	6	12	3.7GHz	4.5GHz	8.25MB	DDR4-2666	-
Xeon W-2145	8	16	3.7GHz	4.5GHz	11MB	DDR4-2666	-
Xeon W-2155	10	20	3.3GHz	4.5GHz	13.75MB	DDR4-2666	-
Xeon W-2175	14	28	2.5GHz	4.3GHz	19MB	DDR4-2666	-
Xeon W-2195	18	36	2.3GHz	4.3GHz	24.75MB	DDR4-2666	-
Xeon W-2223	4	8	3.6GHz	3.9GHz	8.25MB	DDR4 2666	-
Xeon W-2225	4	8	4.1GHz	4.6GHz	8.25MB	DDR4 2933	-
Xeon W-2235	6	12	3.8GHz	4.6GHz	8.25MB	DDR4 2933	-
Xeon W-2245	8	16	3.9GHz	4.5GHz	16.5MB	DDR4 2933	-
Xeon W-2255	10	20	3.7GHz	4.5GHz	19.25MB	DDR4 2933	-
Xeon W-2265	12	24	3.5GHz	4.6GHz	19.25MB	DDR4 2933	-
Xeon W-2275	14	28	3.3GHz	4.6GHz	19.25MB	DDR4 2933	-
Xeon W-2295	18	36	3.0GHz	4.6GHz	24.75MB	DDR4 2933	-

Processor Sockets

1x FCLGA2066

Operating System

- Windows® 10 Pro 64 for Workstations
- Ubuntu Linux LTS
- No operating system

Graphics

Discrete Graphics Support

Supports up to one NVIDIA® Quadro® RTX 8000, or two NVIDIA Quadro RTX 6000 with NVLink

Discrete Graphics Offering

Graphics	Memory	Power	Connector	SLI / NVlink
NVS 810	4GB DDR3	68W	8x miniDP	None
Quadro P400	2GB GDDR5	30W	3x miniDP	None
Quadro P600	2GB GDDR5	45W	4x miniDP	None
Quadro P620	2GB GDDR5	40W	4x miniDP	None
Quadro P1000	4GB GDDR5	50W	4x miniDP	None
Quadro P2000	5GB GDDR5	75W	4x DP	None
Quadro P2200	5GB GDDR5	75W	4x DP	None
Quadro P4000	8GB GDDR5	120W	4x DP	None
Quadro P5000	16GB GDDR5X	180W	1x DVI-D DL, 4x DP	SLI

Quadro RTX 4000	8GB GDDR6	160W	3x DP, 1x VirtualLink	None
Quadro RTX 5000	16GB GDDR6	265W	4x DP, 1x VirtualLink	NVLink
Quadro RTX 6000	24GB GDDR6	295W	4x DP, 1x VirtualLink	NVLink
Quadro RTX 8000	48GB GDDR6	295W	4x DP, 1x VirtualLink	None
Quadro GP100	16GB HBM2	235W	1x DVI-D DL, 4x DP	NVLink
Quadro GV100	32GB HBM2	250W	4x DP	None

Monitor Support

Supports multiple displays via discrete graphics

Chipset

Intel C422 chipset

Memory

Memory Type

- DDR4-2666 RDIMM ECC
- DDR4-2933 RDIMM ECC

Memory Slots

8 DIMM sockets with 4 channels

Memory Protection

ECC

Max Memory

- Up to 512GB (with 8 x 64GB DDR4-2933 RDIMMs) on models with Intel Xeon W-2200 Series processor
- Up to 256GB (with 8 x 32GB DDR4-2666 RDIMMs) on models with Intel Xeon W-2100 Series processor

Notes:

- The max memory is based on the test results with current Lenovo® memory offerings. The system may support more memory as the technology develops.

Storage

Storage Support

Up to 6x 3.5" SATA HDD / 2.5" SATA HDD / 2.5" SATA SSD + 9x M.2 PCIe SSD + 1x PCIe AIC SSD

- 3.5" HDD up to 6TB each
- 2.5" SATA HDD up to 500GB each
- 2.5" SATA SSD up to 2TB each
- M.2 PCIe SSD up to 2TB each
- PCIe AIC SSD up to 480GB each

Storage Controllers

Storage Controller	Type	Interface	RAID	Cache
Onboard Intel RST SATA RAID	Standard	SATA 6.0Gb/s	0/1/10/5	None
9440-8i PCIe	Optional	SAS 12.0Gb/s, SATA 6.0Gb/s	0/1/10/5	None
9460-16i PCIe	Optional	SAS 12.0Gb/s, SATA 6.0Gb/s	0/1/10/5/6	4GB DDR4, SuperCap
NVMe Basic	Optional	PCIe NVMe	0/1/10	None
NVMe Premium	Optional	PCIe NVMe	0/1/10/5	None
NVMe for Intel SSD	Optional	PCIe NVMe	0/1/10/5	None

Storage Type

Disk Type	Interface	RPM	Offering
3.5" SATA HDD	SATA 6Gb/s	7.2K	1TB/2TB/4TB/6TB
2.5" SATA HDD	SATA 6Gb/s	7.2K	500GB/500GB FIPS
2.5" SATA SSD	SATA 6Gb/s	-	256GB/512GB/1TB/2TB
2.5" SAS HDD	SAS 12Gb/s	10K	300GB/600GB

M.2 PCIe SSD	PCIe NVMe	-	256GB/512GB/1TB/2TB
PCIe AIC SSD	PCIe NVMe	-	480GB

Removable Storage

Optical Support

Up to two HH or 9.0mm optical drive, DVD-ROM, DVD±RW, and Blu-ray

Card Reader

- SD card reader
- 15-in-1 card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC662 codec

Power Supply

Power	Type	Efficiency	Key Features
690W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
900W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
1000W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

DESIGN

Mechanical

Form Factor

Tower (33L)

Dimensions (WxDxH)

165 x 460 x 440 mm (6.5 x 18.1 x 17.3 inches, with feet)

Weight

24 kg (52.91 lbs, maximum configuration)

Bays

4x 3.5" disk bays (2 standard, 2 optional)

Flex Bays

2x flex bays. Supports the following:

- 2x half-height optical drives
- 2x 5.25" 9.0mm optical drives
- 1x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD
- 1x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure
- 1x flex module for the following options:

Tray 1: 9.0mm optical

Tray 2: 15-in-1 USB 3.1 Gen 1 reader, 2x Thunderbolt™, or 4-digit diagnostic display

Port 1 and 2: Front USB 3.1 Gen 1 Type-C or eSATA

- 2x M.2 SSD with 2x Front Removable Drive Enclosures

M.2 Slots

Up to 9x M.2 SSD:

- 2 via onboard slots
- 4 via Quad M.2 to PCIe adapter
- 3 via Single M.2 to PCIe adapters

Expansion Slots

- Two PCIe 3.0 x16
- One PCIe 3.0 x8
- Two PCIe 3.0 x4
- One PCI

Expansion Slots Offering

Slot 1: PCIe 3.0 x8, full height, full length, 25W, open ended, by CPU
Slot 2: PCIe 3.0 x16, full height, full length, 75W, double-width, by CPU
Slot 3: PCIe 3.0 x4, full height, half length, 25W, open ended, by PCH
Slot 4: PCIe 3.0 x16, full height, full length, 75W, double-width, by CPU
Slot 5: PCI, full height, full length, 25W
Slot 6: PCIe 3.0 x4, full height, half length, 25W, open ended, by PCH

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ45, supports Wake-on-LAN

Optional Ethernet

Additional Ethernet options via PCIe adapter

WLAN + Bluetooth™

- Intel Dual Band Wireless-AC 8265, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 4.2
- No WLAN and Bluetooth

Ports

Front Ports

- 1x USB 3.1 Gen 1 (Always On and fast charge)
- 3x USB 3.1 Gen 1
- 1x headphone / microphone combo jack (3.5mm)

Notes:

- The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.
 - USB 2.0: 480 Mbit/s;
 - USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
 - USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
 - USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
 - Thunderbolt 3: 40 Gbit/s;
 - FireWire 400: 400 Mbit/s;
 - FireWire 800: 800 Mbit/s;

Optional Front Ports

- 1x eSATA (with flex module)
- 2x Thunderbolt (with flex module, USB-C form, one supports video-out)
- 1x USB-C 3.1 Gen 1 (with flex module)

Rear Ports

- 2x USB 2.0
- 4x USB 3.1 Gen 1
- 2x PS/2 ports (keyboard/mouse)
- 1x Ethernet (RJ-45)
- 1x microphone (3.5mm)
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)

Notes:

- For video ports on discrete graphics, please see graphics section

Optional Rear Ports

- 2x USB-C 3.1 Gen 2 (via 2-port USB-C expansion card)
- 1x Thunderbolt
- 1x serial

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 1.2, TCG certified

Physical Locks

- (Optional) Access Panel Lock Kit with Common Key
- (Optional) Access Panel Lock Kit with Unique Key
- Kensington® Security Slot

BIOS Security

- Power-on password
- Administrator password

MANAGEABILITY**System Management**

Intel vPro with Intel AMT 11

Diagnostic

- Photo-audio transfer with Lenovo PC Diagnostics for Android and iOS
- ThinkStation® Diagnostics for Windows
- Front 4-digit diagnostic
- None

SERVICE**Warranty****Base Warranty**

3-year limited onsite service (with 9x5 NBD, for most models)

ENVIRONMENTAL**Environmental Specifications****Temperature**

Operating: 10° C to 35° C (50° F to 95° F)

Storage: -40°C to 60°C (-40°F to 140°F) in original shipping carton

Storage: -10°C to 60°C (14°F to 140°F) without carton

Altitude

Operating: -15.2m to 3048m (-50ft to 10000ft)

Storage: -15.2m to 10668m (-50ft to 35000ft)

Humidity

Relative Humidity Operating: 10% to 80% (non-condensing)

Relative Humidity Storage/Transit: 10% to 90% (non-condensing)

Wet Bulb Temperature Operating: 25°C (77°F) max

Wet Bulb Temperature Non-operating: 40°C (104°F) max

CERTIFICATIONS**Green Certifications**

- EPEAT™ Silver
- ENERGY STAR® 8.0 (On model 30BE00B7US)
- GREENGUARD®
- RoHS compliant

ISV Certifications

Please visit www.thinkworkstations.com/isv-certifications/

