DELL Technologies

PRECISION 7820 TOWER

Dual processor performance in an innovative, compact design.

POWERFUL PERFORMANCE

Power through the most complex, demanding applications more quickly with a new generation of dual-socket performance with the Intel Xeon Scalable Processor family featuring up to 28 cores per processor. System memory is expandable up to 768GB @2933MHz with select processors. In addition, every Dell Precision comes with the exclusive Dell Optimizer for Precision software, which automatically tunes your workstation to run applications at the fastest speeds possible. DO-P also optimizes things like WiFi connections, battery usage and charging, sign-in speeds and audio quality.

LATEST TECHNOLOGY

Ready for complex projects, including artificial intelligence and virtual reality workflows, with next generation Radeon™ Pro and highest performing Nvidia RTX professional graphics. No project is too big with up to 60TB of total storage in front FlexBays provide maximum storage expandability with SATA, SAS and PCIe M.2/U.2 NVMe solid state drives featuring informed hot swap access, so you never have to stop creating.

INNOVATIVE DESIGN

Front FlexBay design supports a range of modules from scalable storage to security options, you can build the workstation designed for your creative expertise. Secure your data with informed hot swap NVMe SSDs and lockable hard drive carriers. The best-in-class smart design includes integrated front and rear handles for easy deployment and moves and an externally accessible tool-less (lockable) power supply for superior serviceability.

MISSION-CRITICAL RELIABILITY

All Dell Precision workstaitons are Independent Software Vendor (ISV) certified to ensure the high-performance applications you rely on every day run smoothly. Also Xeon processors support Error Correcting Code (ECC) memory which identifies and corrects single bit memory errors. Our exclusive Reliable Memory Pro software works on top of ECC memory to identify and map out bad memory sectors and will alert you when the memory is at a critical level and needs replaced - providing layers of protection against memory related errors.

Essential Accessories

Dell Wireless Premium Keyboard & Mouse Combo | KM717

Enhance productivity and enjoy its elegant design that will fit into virtually any workspace. For increased productivity you can simultaneously pair up to two compatible devices with Bluetooth LE.

Dell UltraSharp Ultra HD 8K Monitor with PremierColor | UP3218K

Experience realistic images like never before on the award-winning, world's first 31.5" 8K monitor featuring Dell PremierColor.

Jabra Evolve 75

With the ambient noise cancellation feature of this wireless headset you can hear every word clearly on your next call. This easy to carry device is certified for Microsoft Skype for Business.

3Dconnexion SpaceMouse Wireless

SpaceMouse Pro Wireless handles 3D navigation for a revolutionary two-handed work style preferred by the world's top 3D professionals. Intuitively examine and analyze your designs from every angle.

X-Rite Colorimeter i1Display Pro

The i1Display Pro ensures a perfectly calibrated and profiled display while delivering the speed, options and flexibility needed to maintain color accuracy.

Built for business

Dell Technologies Unified Workspace

Dell Technologies Unified Workspace is the most comprehensive solution to deploy, secure, manage and support virtually all devices from the cloud. We designed this revolutionary solution with intelligence and automation providing you with visibility across the entire endpoint environment. We help you save time, improve user experience, optimize resources and strenthen security.
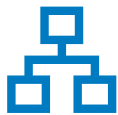
DEPLOY

Our modern deployment solution, ProDeploy in the Unified Workspace allows you to revolutionize the way deployment gets done. By spending just one hour for set up , IT can then hand deployment to Dell and have preconfigured systems shipped directly to the end users--wherever they are.

SECURE

Dell Endpoint Security for the Unified Workspace helps you manage growing cyber risks while embracing workforce transformation. With Dell SafeGuard and Response powered by Secureworks, you gain actionable insight to help you quickly and efficiently prevent, detect and respond to cyber-attacks - keeping your environment free from harm.

MANAGE

We integrated our hardware management solution Dell Client Command Suite with VMware Workspace ONE, allowing you to take advantage of unified endpoint management (UEM) and manage the firmware, operating system and applications for all devices from the Workspace ONE console. UEM simplifies the management of the entire environment saving IT time from having to work between separate consoles for PCs and phones.

SUPPORT

ProSupport Plus continues to be the only predictive and proactive support in the market. When compared to key competitors, ProSupport Plus with SupportAssist reduced time to resolve a failed hard drive with up to 11x faster time to resolution[*]

*Based on a Principled Technologies test report, "Spend Less Time and Effort Troubleshooting Laptop Hardware Failures" dated April 2018. Testing ommissioned by Dell, conducted in the United States. Actual results will vary. Full report: http://facts.pt/L52XKM

Feature	Precision 7820 Tower Technical Specifications
Processor Options	One or Two Intel Xeon Scalable Processor family CPUs (2nd generation) with up to 28 cores per processor and Intel Advanced Vector Extensions, Intel Trusted Execution Technology, Intel AES New instructions, Optimized Intel Turbo Boost and optional Intel vPro™ technology. Please go to the Precision 7820 Tower on-line site for list of processor options.
Operating System Options	Windows 11 Pro for Workstations Windows 10 Pro for Workstations (Windows 11 Pro license included) Red Hat Enterprise Linux 8.0 Ubuntu Linux 20.04 NeoKylin 6.0 SP5 (China only - select options supported)
Chipset	Intel® C621 (Lewisburg)
Memory Options[1]	Six channel memory up to 768GB 2933MHz DDR4 ECC memory with dual CPUs, 12 DIMM Slots (6 DIMMs per CPU). Note: Memory speed is dependent on specific Intel Xeon Scalable Processor CPU installed.
Graphics Options[1]	Support for 2 PCI Express x16 Gen 3/4 graphics cards, up to 2 x 295W double width graphics cards on single CPU configurations. Up to 2 x 160W single width graphics cards on dual CPU configurations. **High end 3D cards:** Radeon™ Pro W6800 Radeon™ Pro W5700 NVIDIA Quadro® GV100 NVIDIA RTX A6000 NVIDIA RTX A5000 NVIDIA RTX A4500 NVIDIA Quadro® RTX 5000 NVIDIA RTX A5500 **Mid-range 3D cards:** Radeon™ Pro W6600 NVIDIA RTX A4000 NVIDIA RTX A2000 12GB NVIDIA RTX A2000 **Entry 3D cards:** Radeon™ Pro W6400 (Coming Soon) Radeon™ Pro WX 3200 NVIDIA T1000 8GB NVIDIA T1000 NVIDIA T600 NVIDIA T400 4GB NVIDIA T400
Storage Options[2]	Front accessible FlexBays support up to 4 x 2.5"/3.5" SATA HDD/SSDs and up to 6 x 2.5" and 5 x 3.5" drives with 5.25" bay populated. Up to 2 front accessible (informed hot plug) M.2/U.2

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Storage Options[2]	NVMe PCIe SSDs are supported in FlexBay 1 on PCIe backplane chassis with integrated Intel controller and up to 4 with MegaRAID 9460 NVMe hardware RAID controller option - see controller section. Note Precision PCIe FlexBay backplane and single M.2 Module (incl. 1 M.2 PCIe NVMe carrier) kits are available for customers to convert standard FlexBays to support Intel and MegaRAID NVMe controller options. (different kits) Up to 4 x M.2 NVMe PCIe SSDs via 1 x Dell Ultra-Speed Drive Quad x16 card. Go to this link for details including video instructions. Upgrading Storage in the Dell Precision 5820 | 7820 | 7920 Tower Workstations In addition, Customer kits to add M.2 NVMe drives (without converting the FlexBay to PCIe) are available for the Dell Ultra-Speed Duo and Quad PCIe cards. Up to 4 x 2TB drives on 1 Dell Precision Ultra-Speed Drive Quad x16 card. **M.2 NVMe PCIe SSDs** **Front FlexBay M.2/U.2 NVMe PCIe SSDs** Up to 4 x 4TB M.2 drives on enabled PCIe backplane FlexBay systems. Up to 6 x 512GB drives **2.5" SATA SSD** Up to 6 x 1.92TB Enterprise Drives **2.5" SATA 7200 RPM.** Up to 6 x 512GB drives **3.5" SATA 7200 RPM Hard Drives** Up to 6 x 12TB Enterprise Drives **3.5" SAS 7200 RPM 12Gb/s** Up to 5 x 4TB **2.5" SAS 10K RPM 12Gb/s** Up to 6 X 2.4TB **2.5" SAS 15K RPM 12Gb/s** Up to 6 x 600GB **M.2 PCIe SED SSD** 512GB and 1TB
Storage Controller	Integrated: Intel® chipset SATA controller (6Gb/s) with 6 SATA ports plus 2 dedicated ports for optical drives. Intel vROC software RAID 0,1,5,10* Optional Intel vROC software NVMe RAID 0,1,10 (motherboard activation key) for M.2 NVMe PCIe SSDs on Dell Ultra-Speed Drive Quad card, Duo x8 card (RAID 0,1) and for 2 x front FlexBay M.2/U.2 NVMe PCIe SSDs (RAID 0,1) Customer kit available for Intel vROC motherboard activation key for NVMe RAID support. **Optional:** Broadcom MegaRAID® SAS 9440-8i 12Gb/s SAS (6Gb/s SATA) PCIe controller, 8 ports, Software RAID 0,1,5,10. MegaRAID 9460-8i controller controller (4GB cache with Flash module/ Super Cap backup) Hardware RAID 0,1,5,10. MegaRAID 9460-8i controller NVMe option supports up to 4 front FlexBay M.2/U.2 NVMe PCIe SSDs with Hardware RAID 0,1,5,10

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Communications	**Integrated**: Intel® i219 Gigabit Ethernet controller with Intel Remote Wake UP, PXE and Jumbo frames support **Optional**: Intel® i210 10/100/1000 single port PCIe (Gen 3 x1) gigabit network card, Intel® X550-T2 10GbE dual port PCIe (Gen 3 x4) network card, Intel Dual Band Wireless AC 8265 (802.11ac) 2x2 + Bluetooth module
Audio Controller	Integrated Realtek ALC3234 High Definition Audio Codec (2 Channel)
Speakers	Internal Speaker; Optional Dell 2.0 stereo speaker systems available and Dell sound bar for select flat-panel displays
Add-in cards	**Optional**: Dell Precision Ultra-Speed Drive Duo (HH/HL,x8) & Ultra-Speed drive Quad (FH/FL,x16) with active cooling. Support for up to 2 and 4 M.2 PCIe NVMe SSDs respectively. Optional USB 3.1 (Gen 2) 10Gb/s Type C card (2 ports) 1 DP pass-through port Optional dual & quad display Teradici PCoIP remote workstation host PCIe cards Optional Thunderbolt 3 PCIe Card (2 ports) 1 DP pass-through port Optional Serial Port PCIe Card
I/O Ports	**Front** 2 - USB 3.2 Gen1 Type A ports 1 - USB 3.2 Gen1 Type C port (DP/Power Delivery) 1 - USB 3.2 Gen1 Type C port 1 - Universal Audio Jack **Internal** 1 – USB 2.0 Type A 1 - 2 x 5 USB 2.0 header. (requires 3rd party splitter cable to support 2 x USB 2.0 Type A ports) 6 - SATA @6Gb/s plus 2 for optical **Rear** 5 - USB 3.2 Gen 1 Type A Ports 1 - USB 3.2 Gen 1 Type A Port (DP/PowerDelivery) 1 – Serial 1 – RJ45 Network 2 – PS2 1 –Audio Line out 1– Audio Line in/Microphone
Chassis	**HxWxD**: 16.45" (417.9 mm)	Width: 6.95" (176.5 mm)	Depth: 20.4" (518.2 mm) Starting at Weight: 34lb/15.4kg **Bays**: (2) FlexBays support M.2/U.2 PCIe NVMe SSDs - up to 2 drives standard and optionally up to 4 with MegaRAID NVMe controller. (2) FlexBays also support 2.5/3.5" SATA HDD/SSDs - up to 2 drives standard and optionally up to 5x 3.5" or 6x 2.5" drives with Dell Ultra Speed Drive as boot device. 3rd FlexBay can support 5.25" HH Optical drive or 2x 2.5" or 1x 3.5" HDD/SSD Optional configs are supported ex factory and via customer kits.

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Chassis	(1) Slimline optical bay; (1) SD slot UHS ll Class 3 with read only support (SW enabled) Available PCIe backplane FlexBay chassis supporting 1 - 4 x M.2/U.2 PCIe NVMe SSDs. **Slots**: All slots PCIe Gen 3: (2) PCIe x16, (1) PCIe x16 wired as x8, (1) PCie x16 wired as x4, (1) PCIe x16 wired as x1, 1 PCI 32/33 **Power Supply**: 950W (input voltage 100VAC - 240VAC) –90% efficient (80PLUS Gold Certified) Externally accessible/removable/lockable
Storage devices	Slimline Bay Options: DVD-ROM; DVD+/-RW, 5.25" Bay Options: DVD+/-RW; Standard: SD slot UHS ll Class 3 with read only support
Security Options (Check regional availability)	Trusted Platform Module (TPM 2.0); Chassis Intrusion switch; Setup/BIOS Password; I/O Interface Security; Kensington® lock slot, Padlock ring, lockable power supply; Optional hard drive locking sleds (key lock), Dell Data Guardian, Dell Endpoint Security Suite Enterprise Lockable front bezel (covers SATA/SAS FlexBays), Front FlexBay NVMe drives are removable (informed hot swap).
Manageability[3]	AMT or vPro with DASH support Dell vPro Enhancements (Grasslake) SNMT/CIM vis OMCI Dell Command Suite
Regulatory and Environmental	Energy Star® configurations available including 80 PLUS® registered Gold power supplies; EPEAT Gold registered (see epeat.net for specific registration rating/status by country); China CECP; GS Mark. For a complete listing of declarations & certifications, see Dell's regulatory & compliance homepage at dell.com/regulatory_compliance
Warranty & Support Services[4]	3-Year Limited Hardware Warranty and 3-year NBD On-Site Service after Remote Diagnosis Optional: Dell ProSupport is designed to rapidly respond to your business's needs, help protect your investment and sensitive data, and provide enhanced proactive support services to help reduce risk and complexity within your IT environment

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