DELL

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 Precision Optimizer (DPO) software, which automatically tunes your workstation to run some of the most popular (ISV) applications at the fastest speeds possible. DPO Premium is an AI-based software that uses machine learning to optimize the workstation based on how the user uses it.

LATEST TECHNOLOGY

Ready for complex projects, including artificial intelligence and virtual reality workflows, with next generation Radeon™ Pro and highest performing NVIDIA Quadro® professional graphics with support for up to 600W of graphics power. 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 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 the optional Smart Card (CAC/PIV) reader, 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, with Xeon processors you can get 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 Canvas

Bring your ideas to life with a 27-inch workspace that empowers natural digital creation. Featuring a precise EMR pen, totem, and touch surface.

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 (1st and 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
Operating System Options	Windows 10 Pro for Workstations (up to 4 Cores) Windows 10 Pro for Workstations (4 Cores Plus) Red Hat® Enterprise Linux® 7.5 Red Hat Enterprise Linux 8.0 (Sept. 2019) is required for 2nd Generation Xeon SP (Cascade Lake) CPUs Ubuntu Linux 16.04 Ubuntu Linux 18.04 NeoKylin 6.0 SP3 (China only - select options supported)
Chipset	Intel® C621 (Lewisburg)
Memory Options[1]	Six channel memory up to 768GB 2933MHz DDR4 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 graphics cards - up to 600W with maximum of 2 x 300W 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 WX 9100 Radeon™ Pro SSG NVIDIA Quadro GV100 NVIDIA Quadro P6000 NVIDIA Quadro P5000 NVIDIA Quadro RTX 8000 (future) NVIDIA Quadro RTX 6000 NVIDIA Quadro RTX 5000 Mid-range 3D cards: Radeon™ Pro WX 7100 Radeon™ Pro WX 5100 Radeon™ Pro WX 4100 NVIDIA Quadro P4000 NVIDIA Quadro P2000 NVIDIA Quadro RTX 4000 Entry 3D cards: Radeon™ Pro WX 3100 Radeon™ Pro WX 2100 NVIDIA Quadro P1000 NVIDIA Quadro P620 NVIDIA Quadro P400 Professional 2D cards: NVIDIA NVS 310
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 (hot plug) M.2/U.2
Storage Options[2]	NVMe PCle SSDs are supported in FlexBay 1 on enabled PCle backplane chassis with integrated Intel controller and up to 4 with MegaRAID 9460 NVMe hardware RAID controller option - see controller section. Note Precision PCle FlexBay backplane and single M.2 Module (incl. 1 M.2 PCle NVMe carrier) kits are available for customers to convert standard FlexBays to support Intel and new MegaRAID NVMe controller options. (different kits) NVMe RAID 0,1 option (Intel RSTe vROC). NVMe HW RAID 0,1,5,10 (MegaRAID 9460 NVME controller) Up to 4 x M.2 NVMe PCle SSDs via 1 x Dell Ultra-Speed Drive Quad x16 card. NVMe RAID 0,1,10 option (Intel RSTe vROC) M.2 NVMe PCle SSDs Up to 4 x 2TB drives on 1 Dell Precision Ultra-Speed Drive Quad x16 card. U.2 Intel® Optane™905P SSDs Up to 4 x 960GB drives Front FlexBay M.2/U.2 NVMe PCle SSDs Up to 4 x 2TB M.2 drives 2.5" SATA 7200 RPM. Up to 6 x 1TB drives 2.5" SATA SSD Up to 6 x 1TB drives Up to 6 x 800GB drives 3.5" SATA 7200 RPM Hard Drives 2.5" SAS SSD Up to 5 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 1.8TB 2.5" SAS 15K RPM 12Gb/s Up to 6 x 600GB M.2 PCle 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 RSTe software RAID 0,1,5,10 Intel RSTe (vROC) software RAID 0,1,10 option (motherboard activation key) for M.2 NVMe PCle 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 PCle SSDs (RAID 0,1) or front FlexBay NVMe PCle SSDs (RAID 0,1) Customer kit available for Intel RSTe (vROC) motherboard activation key for NVMe RAID support. Optional: Broadcom MegaRAID® SAS 9440-8i 12Gb/s SAS (6Gb/s SATA) PCle controller, 8 ports, Software RAID 0,1,5,10. MegaRAID® SAS 9460-16i 12Gb/s SAS (6Gb/s SATA)) PCle controller (4GB cache with Flash module/Super Cap backup) Hardware RAID 0,1,5,10. MegaRAID 9460 controller NVMe option supports up to 4 front FlexBay M.2/U.2 NVMe PCle SSDs with Hardware RAID 0,1,5,10

Features & Technical Specifications

Feature	Precision 7820 Tower Technical Specifications
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 3.1 Gen 1 Type A 2 – USB 3.1 Type C 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 6 – USB 3.1 Gen 1 Type A 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 can support up to 2x 3.5" or 2.5" drives each and (1) 5.25" FlexBay (can support 1 x 3.5" or 2 x 2.5" HDD/SSD drives as factory option or customer kit) (1) Slimline optical bay; (1) SD slot UHS II 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

Feature	Precision 7820 Tower Technical Specifications
Storage devices	Slimline Bay Options: DVD-ROM; DVD+/-RW, CAC/PIV card reader. 5.25" Bay Options: BD, DVD+/-RW; Standard: SD slot UHS II Class 3 with read only support
Security Options (Check regional availability)	Trusted Platform Module (TPM 2.0); Optional CAC/PIV card reader for slimline bay, 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 FlexBays), Front FlexBay NVMe drives are removable (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® 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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