Features & Technical Specifications

Feature	Precision 5820 Tower Technical Specifications
Processor Options	Intel® Xeon® Processor W-2000 Family and Core X Series CPUs with up to 18 cores and Intel Advanced Vector Extensions, Intel Trusted Execution Technology, Intel AES New instructions, Optimized Intel Turbo Boost and optional Intel vPro™ technology (Xeon W CPUs only) (Important Note: Features and Supported Configurations will differ between 5820 Tower Workstations with Intel® Xeon® W Processors and 5820 Tower Workstations with Intel® Core™ X Processors. Please see systems on Dell.com/ Precision for specific configuration details.)
Operating System Options	Windows 10 Pro for Workstations (up to 4 Cores) Windows 10 Pro for Workstations (4 Cores Plus) Windows 10 Pro - for Core X Series CPUs Red Hat Enterprise Linux 8.0 Ubuntu Linux 18.04 Suse Linux (SLES 12 SP2) supported* NeoKylin 6.0 SP5 (China only) *
Chipset	Intel® C422 (Skylake/Cascade Lake W) ; Intel X299 (Skylake/Cascade Lake X)
Memory Options[1]	Four channel memory up to 512GB 2666MHz and up to 256GB 2933MHz DDR4 (RDIMM) ECC memory. (Up to 256GB 2666MHz DDR4 (UDIMM) Non-ECC memory) 8 DIMM slots. Note: Memory speed is dependent on specific Intel Xeon or Core X Processor installed.
Graphics Options[1]	Support for 2 PCI Express® x16 Gen 3 graphics card - up to 600W with maximum of up to 2 x 300W double width graphics cards. Not all graphics card offerings are available with Core X I9 and I7 Series CPUs **High end 3D cards:** Radeon™ Pro WX 9100 Radeon™ Pro SSG NVIDIA Quadro GV100 NVIDIA Quadro P6000 NVIDIA Quadro P5000 Nvidia Quadro RTX 8000 Nvidia Quadro RTX 6000 Nvidia 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 P2200 NVIDIA Quadro RTX 4000 **Entry 3D cards:** Radeon™ Pro WX 3200 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 NVMe PCIe SSDs are supported in FlexBay 1 on enabled

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Storage Options[2]	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) Only 1 front accessible M.2 NVMe PCIe SSD is supported, due to reduced PCIe lane support on Core X I9 and I7 Series CPUs NVMe RAID 0,1 option (Intel RSTe vROC).* Up to 4 x M.2 NVMe PCIe SSDs via 1 x Dell Ultra-Speed Drive Quad x16 card. NVMe RAID 0,1,10 option (Intel RSTe vROC). **M.2 NVMe PCIe SSDs** Up to 4 x 2TB drives on 1 Dell Precision Ultra-Speed Drive Quad x16 card. **Front FlexBay M.2/U.2 NVMe PCIe SSDs** Up to 4 x 2TB M.2 drives **Intel® Optane™905P SSDs** Up to 4 x 960GB drives **2.5" SATA SSD** Up to 6 x 1.9TB drives **2.5" SATA 7200 RPM** Up to 6 x 1TB drives **3.5" SATA 7200 RPM Hard Drives** Up to 5 x 12TB Enterprise Drives **2.5" SAS SSD** Up to 6 x 800GB 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 PCIe SED SSD** 512GB and 1TB Not all storage offerings (including SAS drives) are available with Core X Series CPUs
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 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) or front FlexBay NVMe PCIe 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) PCIe controller, 8 ports, Software RAID 0,1,5,10.* MegaRAID® SAS 9460-16i 12Gb/s SAS (6Gb/s SATA) PCIe 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 PCIe SSDs with Hardware RAID 0,1,5,10

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Communications	**Integrated:** Intel® i219 Gigabit Ethernet controllers 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
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 Gen 1 Type C 1 – Universal Headphone 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 (6th port supports Power Delivery) 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 3.25" or 2.5" drives each and (1) 5.25" 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: 425W* or 950W (input voltage 100VAC - 240VAC) –90% efficient (80PLUS Gold Certified) Externally accessible/removable/lockable
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

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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