12

Appendix B. Standards compliance

Table 27. Industry standard documents

Standard	URL for information and specifications
ACPI Advance Configuration and Power Interface Specification, v2.0c	acpi.info
Ethernet IEEE 802.3-2005	standards.ieee.org/getieee802/802.3.html
HDG Hardware Design Guide Version 3.0 for Microsoft Windows Server	microsoft.com/whdc/system/platform/pcdesign/desguide/serverdg.mspx
IPMI Intelligent Platform Management Interface, v2.0	intel.com/design/servers/ipmi
DDR4 Memory DDR4 SDRAM Specification	jedec.org/standards-documents/docs/jesd79-4.pdf
PCI Express PCI Express Base Specification Rev. 2.0 and 3.0	pcisig.com/specifications/pciexpress
PMBus Power System Management Protocol Specification, v1.2	pmbus.info/specs.html
SAS Serial Attached SCSI, v1.1	t10.org
SATA Serial ATA Rev. 2.6; SATA II, SATA 1.0a Extensions, Rev. 1.2	sata-io.org
SMBIOS System Management BIOS Reference Specification, v2.7	dmtf.org/standards/smbios
TPM Trusted Platform Module Specification, v1.2 and v2.0	trustedcomputinggroup.org
UEFI Unified Extensible Firmware Interface Specification, v2.1	uefi.org/specifications
USB Universal Serial Bus Specification, Rev. 2.0	usb.org/developers/docs

13

Appendix C Additional resources

Table 28. Additional resources

Resource	Description of contents	Location
PowerEdge R740/R740xd Installation Service Manuals	This manual, available in PDF format, provides the following information: · Chassis features · System Setup program · System messages · System codes and indicators · System BIOS · Remove and replace procedures · Troubleshooting · Diagnostics · Jumpers and connectors	Dell.com/Support/Manuals
PowerEdge R740/R740xd Getting Started Guide	This guide ships with the system, and is also available in PDF format. This guide provides the following information: · Initial setup steps · Key system features · Technical specifications	Dell.com/Support/Manuals
Rack installation Instructions	This document ships with the rack kits, and provides instructions for installing a server in a rack.	Dell.com/Support/Manuals
Information Update	This document ships with the system, is also available in PDF format online, and provides information on system updates.	Dell.com/Support/Manuals
System Information Label	The system information label documents the system board layout and system jumper settings. Text is minimized due to space limitations and translation considerations. The label size is standardized across platforms.	Inside the system chassis cover
Quick Resource Locator (QRL)	This code on the chassis can be scanned by a phone application to access additional information and resources for the server, including videos, reference materials, service tag information, and Dell contact information.	Inside the system chassis cover
Energy Smart Solution Advisor (ESSA)	The Dell online ESSA enables easier and more meaningful estimates to help you determine the most efficient configuration possible. Use ESSA to calculate the power consumption of your hardware, power infrastructure, and storage.	Dell.com/calc

14

Appendix D. Support and Deployment Services

Dell EMC Global Services include a wide, customizable range of service choices to simplify the assessment, design, implementation, management and maintenance of your IT environment and to help you transition from platform to platform. Depending on your current business requirements and the level of service you want, we can provide you with factory, on-site, remote, modular and specialized services that fit your needs and budget. We'll help you with a little or a lot - your choice - and provide you with access to our global resources.

Server Deployment Services

Our Server Deployment Services can maximize the value of your servers quickly using our expert server deployment engineers. With over 10,000 server deployment projects each year, we have experience, best practices, and comprehensive deployment tools to install, configure, and integrate your new solution optimally and correctly. Our deployment experts will assess your environment and understand your goals, then design and integrate your server solution for you.

Table 29. Server deployment capabilities

	Server Installation	Server Integration
Place single server in target workspace	Yes	
Rack, cable, and label servers	Yes	
Install image	Yes	
Connect to network	Yes	Yes
Test and validate connection	Yes	Yes
Install operating system		Yes
Install applications		Yes
Perform advanced configuration services		Yes
Remote configuration services		Yes
Virtualization		Yes
Converged infrastructure		Yes
Test and validate data center integration		Yes

Remote Consulting Services

When you are in the final stages of your PowerEdge server implementation, you can rely on Dell EMC Remote Consulting and our certified technical experts to help you optimize your configuration with best practices for your software, virtualization, server, storage, networking, and systems management.

Data Migration Service

Protect your business and data with our single point of contact to manage your data migration project. Your project manager will work with our experienced team of experts to create a plan using industry-leading tools and proven processes based on global best practices to migrate your existing files and data, so your business gets up and running quickly and smoothly.

ProSupport Enterprise Suite

With Dell EMC ProSupport Services, we can help you keep your operation running smoothly, so you can focus on running your business. We will help you maintain peak performance and availability of your most essential workloads. Dell EMC ProSupport is a suite of support services that enable you to build the solution that is right for your organization. Choose support models based on how you use technology and where you want to allocate resources. From the desktop to the data center, address everyday IT challenges, such as unplanned downtime, mission-critical needs, data and asset protection, support planning, resource allocation, software application management and more. Optimize your IT resources by choosing the right support model.
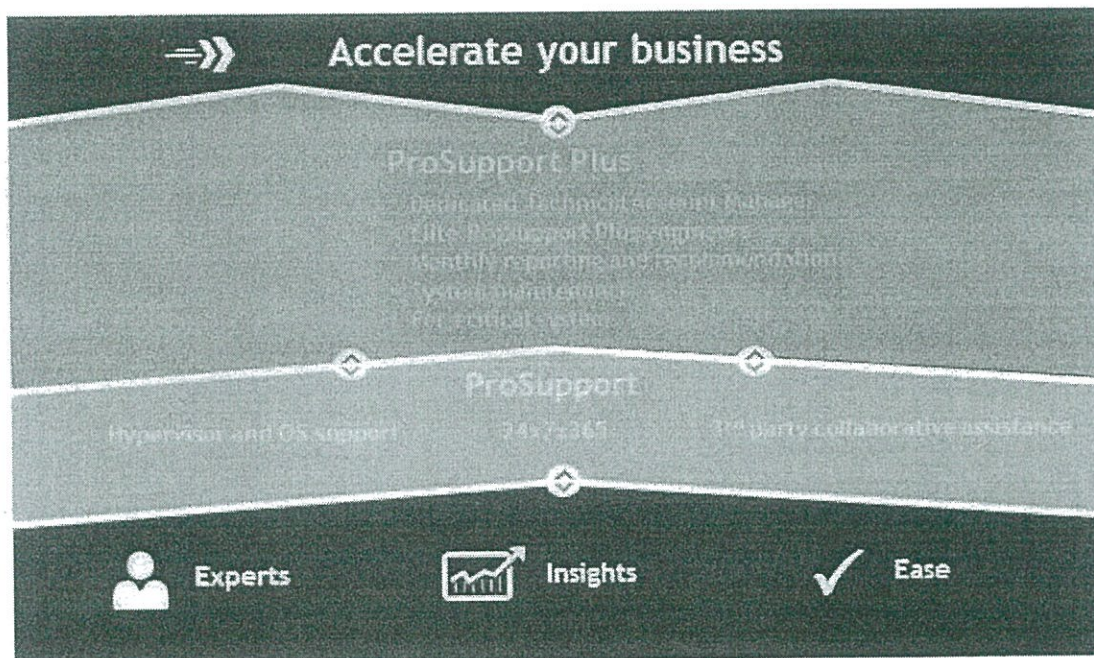

Figure 28. ProSupport Enterprise Suite

ProSupport Plus

When you purchase your PowerEdge server, we recommend ProSupport Plus, our proactive and preventative support for your business-critical systems. Dell EMC ProSupport Plus provides you with all the benefits of ProSupport, plus access to a dedicated Technical Account Manager and our elite ProSupport Plus engineers. ProSupport Plus gives you quick and efficient resolutions, working along with our SupportAssist technology that enables us to get ahead of issues in your environment before they become problems.

ProSupport

Our ProSupport service offers highly trained experts around the clock and around the globe to address your IT needs. We will help you minimize disruptions and maximize availability of your PowerEdge server workloads with:

- 24x7x365 access to certified hardware experts
- Collaborative support assistance with over 195 third-party vendors
- Hypervisor and operating system support
- Onsite parts and labor response options including next business day or four-hour mission critical

ProSupport Flex for Data Center

Dell EMC ProSupport Flex for Data Center offers flexible site-wide support for hyperscale data centers with more than 1,000 assets. Built on standard Dell EMC ProSupport components, Flex for Data Center leverages our global scale while being tailored to suit your needs. While not for everyone, it offers a flexible solution for those with large and complex environments. When you choose Dell EMC ProSupport Flex for Data Center, you will get:

- Enterprise-wide support that covers your entire data center.
- A dedicated Technical Account Manager with remote, on-site, part-time and full-time options.
- Dedicated elite ProSupport Flex technical and field engineers who are trained on your environment and configurations.
- Flexible on-site support and parts options that fit your operational model
- A tailored support plan for your operations staff.

	ProSupport	ProSupport Plus	ProSupport Flex for Data Center
Technical support access	24x7	24x7	24x7
Parts and labor response	NBD or Mission Critical	NBD or Mission Critical	Flexible
TechDirect online cases and dispatch	✓	✓	✓
SupportAssist remote monitoring	✓	✓	✓
Dispatch monitoring and crisis management	✓	✓	✓
Escalation management	✓	✓	✓
Hypervisor and OS support	✓	✓	✓
Collaborative 3rd party software support	✓	✓	✓
SupportAssist proactive resolution	✓	✓	✓
Direct access to elite ProSupport Plus engineers		✓	✓
Dedicated Technical Account Manager		✓	✓
Monthly health check and performance recommendations		✓	✓
Monthly contract renewal and service history reporting		✓	✓
System maintenance (as needed)		✓	✓
Dedicated technical and field support teams			✓
Site-wide entitlement and contract			✓
Case management API			✓

Figure 29. ProSupport Enterprise Suite comparison

Additional professional services

INSTANT SERVICES CO.,LTD
บริษัท อินสแตนท์ เซอร์วิสเซส จำกัด

DELL EMC

Dell EMC Education Services

Dell EMC Education Services offers the PowerEdge server training courses designed to help you achieve more with your hardware investment. The curriculum is designed in conjunction with the server development team, as well as Dell EMC's technical support team, to ensure that the training delivers the information and practical, hands-on skills you and your team need to confidently manage and maintain your Dell EMC server solution.

Dell EMC Global Infrastructure Consulting Services

Dell EMC Global Infrastructure Consulting Services use skilled solution architects, innovative tools, automated analysis and Dell EMC's intellectual property to give you rapid insight into the root causes of unnecessary complexity. We seek better answers than traditional service models, and our strategy is to help you quickly identify high-impact, short-duration projects that deliver return on investment (ROI) and free up resources. The results are practical, action-oriented plans with specific, predictable, measurable outcomes. From data center optimization to server virtualization to systems management, our consulting services can help you build a more efficient enterprise.

Dell EMC managed services

Dell EMC Managed Services are a modular set of lifecycle services designed to help you automate and centrally configure, deploy, and manage your day-to-day data center operations. These services extend your existing on-premise IT infrastructure with off-premise cloud services designed to better address challenges with mobility, highly distributed organizations, security, compliance, business continuity, and disaster preparedness.

Perfected to your vision.

PRECISION 5820 TOWER
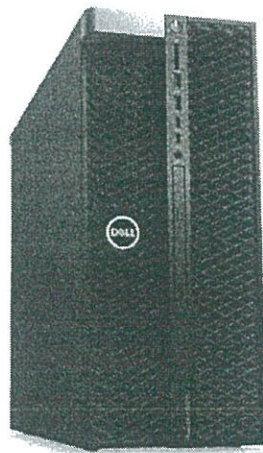
Powerful performance

The Dell Precision 5820 delivers high performance for your most demanding applications with the latest Intel® Xeon® processors and up to 256GB of faster 2666MHz expandable memory. In addition, every Dell Precision comes with the exclusive Dell Precision Optimizer, which automatically tunes your workstation to run some of the most popular (ISV) applications at the fastest speeds possible.

Latest technology

Ready for complex projects, including virtual reality workflows, with the next generation AMD Radeon Pro™ and highest performing NVIDIA Quadro® professional graphics with support for up to 600W of graphics power. Front access FlexBays provide outstanding storage expandability up to 24TB 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

FlexBay design supports a range of modules from scalable storage to audio options, you can build the workstation designed for your creative expertise. Secure your data with the optional Smart Card (CAC/PIV) reader 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.

Outstanding reliability

The revolutionary multichannel thermal design delivers advanced cooling and acoustics so you can enjoy longer productivity under heavy workloads. Precision Workstations are tested (Independent Software Vendor certified) to ensure the high-performance applications you rely on every day run smoothly.

Features & Technical Specifications

Feature	Precision 5820 Tower Technical Specifications
Processor Options	Intel® Xeon® Processor W Family CPUs (Skylake-W) with up to 10 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[1]	Windows 10 Pro for Workstations (up to 4 Cores) Workstation 14. Windows 10 Pro for Workstations (4 Cores Plus) Windows 10 Pro for Workstations Downgrade to Windows 7 (up to 4 Cores) Windows 10 Pro for Workstations Downgrade to Windows 7 (4 Cores Plus) Red Hat® Enterprise Linux® 7.3 Ubuntu Linux 16.04 Suse Linux (SLES 12 SP2) supported NeoKylin 6.0 SP3 (China only)
Chipset	Intel® C422 (Kaby Lake-W) Workstation 3.
Memory Options[2]	Four channel memory up to 256GB 2666MHz DDR4 ECC memory. 8 DIMM slots Note: Memory speed is dependent on specific Intel Xeon Processor W Family processor installed.
Graphics Options	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. **High end 3D cards:** Radeon™ Pro WX 9100 Radeon™ Pro SSG (future) NVIDIA Quadro GP100 NVIDIA Quadro P6000 NVIDIA Quadro P5000 **Mid-range 3D cards:** Radeon™ Pro WX 7100 Radeon™ Pro WX 5100 Radeon™ Pro WX 4100 NVIDIA Quadro P4000 NVIDIA Quadro P2000 **Entry 3D cards:** Radeon™ Pro WX 3100 Radeon™ Pro WX 2100 NVIDIA Quadro P1000 NVIDIA Quadro P600 NVIDIA Quadro P400 **Professional 2D cards:** NVIDIA NVS 310 NVIDIA NVS 315
Storage Options[5] (Check regional availability)	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 NVMe PCIe SSDs are supported in FlexBays on enabled PCIe chassis with integrated Intel controller. NVMe RAID 0,1 option (Intel RSTe vROC). Dell M.2 carrier with PCIe SSD for PCIe FlexBay available as customer kit. 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 1TB drives on 1 Dell Precision Ultra-Speed Drive Quad x16 cards. **Front FlexBay M.2 NVMe PCIe SSDs** Up to 2 x 1TB drives **2.5" SATA SSD** Up to 6 x 1TB 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 6x 900GB (future)
2.5" Self Encrypting Drives
512GB 2.5" SED (OPAL/ FIPS (140-2) HDD
M.2 PCIe SED SSD | Workstation 7. |
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 PCIe SSDs on 1st Dell Ultra-Speed Drive Quad x16
or Duo x8 card (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.
Optional Intel SW (vROC) based RAID 0,1,10 support on Dell Ultra-Speed Drive Quad and Duo (RAID 0,1) cards with NVMe PCIe SSDs.

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,
Aquantia AQN-108 2.5Gbit/5Gbe single port PCIe (Gen3 x4) network card

Audio Controller

Integrated Realtek ALC3234 High Definition Audio Codec (2 Channel)
Optional Dell Digital Audio Interface (2Ch, 120dB S/N ratio – 5.25" Flex Bay option (USB interface) (future)

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 | Workstation 5. |
2 – USB 3.1 Type C
1 – Universal Headphone Jack
Up to 2 (future 4) x4 PCIe slots in PCIe enabled chassis for M.2 and U.2 (future) PCIe SSDs

Internal
1 – USB 2.0
1 – 2 x 5 USB 2.0 header. (requires 3rd party splitter cable to support 2 x USB 2.0 Type A ports)
8 – SATA @6Gb/s

Rear
6 – USB 3.1 Gen 1 Type A | Workstation 5. |
1 – Serial
1 – RJ45 Network
2 – PS2
1 – Audio Line out
1 – Audio Line in/Microphone

Chassis

HxWxD: 417.9mm x 176.5mm x 518.3mm. Optional 19" rackmount rail kit
Bays: (2) FlexBays 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 chassis with PCIe FlexBays supporting M.2 NVMe PCIe SSDs and future U.2 NVMe PCIe SSDs. PCIe FlexBay customer kit available.
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

Workstation 9.

Storage devices

Slimline Bay Options: DVD-ROM, DVD+/-RW 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

Manageability[4]

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

Workstation 15

Warranty & Support Services[5]

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

TAA

YES (check regional availability)
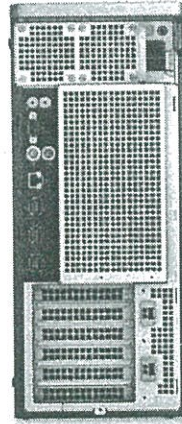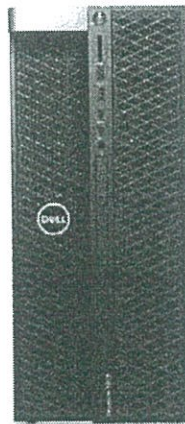
ISV certification applies to select configurations:

[1] A 64-bit operating system is required to support 4GB or more of system memory.
[2] GB means 1 billion bytes and TB equals 1 trillion bytes; actual capacity varies with preloaded material and operating environment and will be less.
[3] Computrace is not a Dell offer. Certain conditions apply. For full details, see terms and conditions at www.absolute.com/en/about/legal/agreements.
[4] Systems Management Options:Intel® vPro Technology - Fully vPro-capable at point of purchase; the vPro systems management option requires vPro processors. Includes support for Intel Advanced Management Technology (AMT) 9.x. Intel® Standard Manageability - Fully enabled at point of purchase. the Intel Standard Management option is a subset of the AMT features. ISM is not upgradeable to vPro technology post-purchase. No Out-of-Band Systems Management - This option entirely removes Intel out of band systems (OOB) management features. The system can still support in band management. OOB management support through AMT cannot be upgraded post-purchase.
[5] Availability and terms of Dell Services vary by region. For more information, visit Dell.com/servicecontracts/global; Limited Hardware Warranty available by writing Dell USA LP, Attn. Warranties, One Dell Way, Round Rock, TX 78682 or see www.dell.com/warranty; Onsite Service after Remote Diagnosis; Remote Diagnosis is determination by online/phone technician of cause of issue; may involve customer access to inside of system and multiple or extended sessions. If issue is covered by Limited Hardware Warranty (www.dell.com/warranty) and not resolved remotely, technician and/or part will be dispatched, usually within 1 business day following completion of Remote Diagnosis. Availability varies. Other conditions apply.

INSTANT SERVICES CO.,LTD
บริษัท อินสแตนท์ เซอร์วิสเซส จำกัด

Essential Accessories
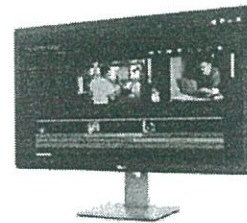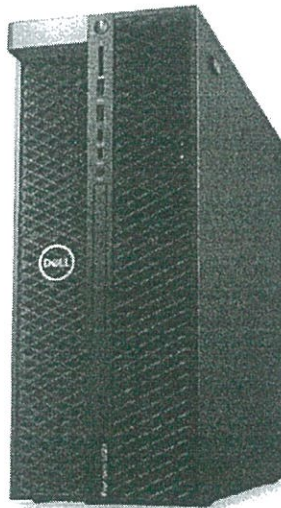
PRECISION 5820 TOWER

Dell Canvas

Workstation 11, 12

Dell Wireless Premium
Keyboard & Mouse
Combo | KM717

Dell UltraSharp Ultra HD
4K Monitor with
PremierColor | UP3216Q

Workstation 5.

Perfected to your vision.

PRECISION 5820 TOWER

INSTANT SERVICES CO.,LTD
บริษัท อินสแตนท์ เซอร์วิสเซส จำกัด

Transform how you work.

DELL 24 MONITOR | P2419H

Workstation 10.1
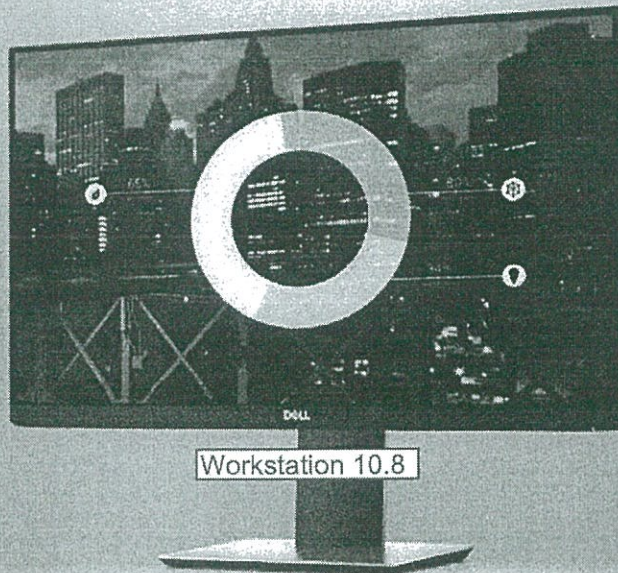
Workstation 10.8

OPTIMIZE YOUR WORKSPACE

Free up valuable desk space with this 23.8" FHD monitor featuring the smallest monitor base in its class.[1] Easily hide away cable clutter with the improved cable management design.

MAXIMIZE PRODUCTIVITY

The 3-sided ultrathin bezel delivers a seamless view across multiple monitors, while Easy Arrange in Dell Display Manager software helps you stay organized when multitasking.

WORK COMFORTABLY

Pivot, tilt, swivel and adjust the height of your monitor to your exact preference. Stay focused longer with a flicker-free screen and ComfortView that optimize eye comfort.

TRUSTED RELIABILITY

Dell monitors — World's number 1 monitor brand[2] Enjoy peace of mind with Dell Premium Panel Exchange, 3 year Advanced Exchange Service[3] and optional ProSupport.[4]

Maximize productivity

OPTIMIZED WORKSPACE

More room to work: Free up valuable desk space with a thin monitor profile and the smallest monitor base in its class.[1]

Clutter-free: Focus on your work while hiding away cable clutter with an improved cable management design.

Consistent and rich colors: A wide viewing angle enabled by In-Plane Switching technology lets you see vibrant colors—no matter where you sit.

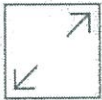## MAXIMIZE PRODUCTIVITY

Expand your efficiency: The three-sided ultrathin bezel design lets you enjoy an uninterrupted view of your content across multiple monitors. And, with dual monitors, you can increase your productivity by up to 18%.[5]

More ways to multitask: Work conveniently across multiple screens and select from predefined templates with the Easy Arrange feature on Dell Display Manager software. Quickly tile and arrange your applications and get back to work faster with Auto-restore, a feature that remembers where you left off.

WORK COMFORTABLY

Adjust to your comfort: Pivot, tilt, swivel and adjust the height of your monitor for a comfortable setup all day long. Or choose from a variety of mounts and stands, including VESA, for even more flexibility.

Easy on the eyes: This TÜV[6] Certified monitor has a flicker-free screen with ComfortView, a feature that reduces harmful blue light emissions. It's designed to optimize eye comfort even over extended viewing.

TRUSTED RELIABILITY

DELL MONITORS – WORLD'S NUMBER 1 MONITOR BRAND[2]

Peace of mind: Dell Premium Panel Exchange allows a free panel replacement during the Limited Hardware Warranty[7] period even if only one bright pixel is found.

Minimize downtime: Your monitor comes with a 3-year Advanced Exchange Service[3] so that if a replacement becomes necessary, it will be shipped to you the next business day during your 3-year Limited Hardware Warranty.[7]

Get a higher level of support: Upgrade to 24x7, in-region technical phone support from qualified engineers with Dell ProSupport option.[4]

INSTANT SERVICES CO LTD

Features & Technical Specifications

Monitor

Dell 24 Monitor - P2419H

Diagonal Viewing Size	60.45 cm (23.8 inches)
Active Display Area	
Height	527.04 mm (20.75")
Width	296.46 mm (11.67")
Maximum Preset Resolution	1920 x 1080 at 60 Hz Workstation10.2
Aspect Ratio	16:9 Workstation 10.1
Pixel Pitch	0.275 mm x 0.275 mm
Pixel Per Inch (PPI)	92
Brightness	250 cd/m² (typical) Workstation10.3
Color Support	Color Gamut (typical): 72% (CIE1931)
	Color Depth: 16.7 Million colors
Contrast Ratio	1000:1 (typical) Workstation 10.4
Viewing Angle	178°/178°
Response Time	8 ms (Normal); 5 ms (Fast) - (gray to gray) Workstaiton10.5
Panel Type	In-Plane Switching Technology
Backlight Technology	LED Edgelight System
ComfortView with Flicker-free screen	Yes
Dell Display Manager Compatibility	Yes
Remote Asset Management	Yes, via Dell Command	Monitor
Display Screen Coating	Antiglare with 3H hardness

Connectivity

Connectors: 1 x DisplayPort version 1.2, 1 x HDMI port version 1.4, 1 x VGA port, 1 x USB 3.0 upstream port (bottom), 2 x USB 3.0 downstream ports (side), 2 x USB 2.0 downstream ports (bottom) Workstation 10.6

Built-in Devices: USB 3.0 super-speed hub (with 1 x USB 3.0 upstream port), 2 x USB 3.0 downstream ports, 2 x USB 2.0 downstream ports

Design Features

Adjustability	Height-adjustable stand (130 mm), Tilt (-5° to 21°) Swivel (-45° to 45°), Pivot (-90° to 90°)
Security	Security lock slot (cable lock sold separately)
Flat Panel Mount Interface	VESA (100 mm x 100 mm)

Power

AC input voltage/frequency/current	100 VAC to 240 VAC / 50 Hz or 60 Hz ± 3 Hz / 1.5 A (typical)
Power Consumption (Operational)	18W (typical) / 42W (maximum)
Power Consumption Stand by / Sleep	Less than 0.3W

Dimensions (with stand)

Height (Compressed ~ Extended)	356.1 mm ~486.1 mm; 14.02" ~19.14"
Width	537.8 mm (21.27")
Depth	166.0 mm (6.54")

Weight

Weight (panel only - for VESA mount)	3.26 kg (7.19 lb)
Weight (with stand)	5.25 kg (11.57 lb)
Weight (with packaging)	7.10 kg (15.65 lb)

Standard Service Plan	Premium Panel Exchange, 3 Years Advanced Exchange Service & Limited Hardware Warranty
Optional Service Plan	Dell ProSupport
Environmental Compliance	ENERGY STAR, EPEAT Gold, RoHS Compliant, TCO-Certified Display, BFR/PVC free monitor (excluding external cables), Arsenic-Free glass and Mercury-Free for the panel only

What's in the box?

Components
+ Monitor with stand

Cables
+ DisplayPort cable
+ USB 3.0 upstream cable
+ Power cable

Documentation
+ Quick Setup Guide
+ Drivers and documentation media
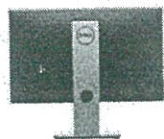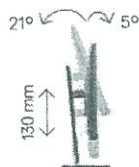+ Safety and regulatory information

Adjustability and connectivity
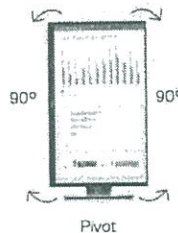
DELL 24 MONITOR | P2419H

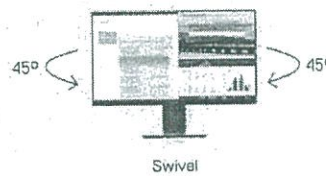Easily adjust the panel to your preferred viewing position.

Back view -
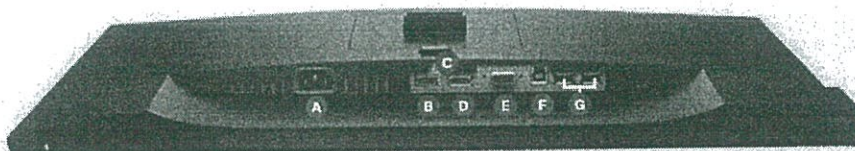Cable management slot
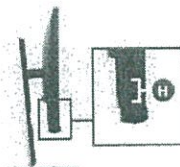
Tilt and height adjustable

Pivot

Swivel

Connectivity

A   Power connector
B   HDMI port
C   Stand lock feature
D   DisplayPort

E   VGA connector
F   USB upstream port
G   USB downstream ports (x2)
H   USB downstream ports (x2)

RECOMMENDED ACCESSORIES
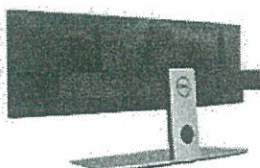
DELL DUAL MONITOR STAND | MDS19

Enjoy toolless monitor installation with Quick Release and the flexibility to pivot, tilt, swivel and adjust the height of each monitor independently. Features a small footprint and neat cable management.

DELL PRO STEREO SOUNDBAR | AE515M

Optimize conference calls and multimedia streaming with exceptional audio clarity. Minimize background noise with the dual mic array and echo-cancelling feature.

DELL WIRELESS KEYBOARD AND MOUSE | KM636

Elevated and spacious chiclet keys with muted typing sound. Pair up to 6 devices with Dell Universal Pairing.

1 Based on Dell internal analysis comparing the area of the monitor base in competitive 23.8" size monitors as of March 2018.
2 Dell monitors are #1 worldwide for 5 consecutive years (2013-2017)! Source: IDC Quarterly PC Monitor Tracker, Q4 2017.
3 Advanced Exchange: Dell will send you a replacement monitor the next business day in most cases, if deemed necessary after phone/online diagnosis. Shipping times may vary by location and for monitors 55" and above. Fee charged for failure to return defective unit. See dell.com/servicecontracts/global.
4 Availability varies, please visit www.dell.com/support for details.
5 Source: "Dell Displays, Productivity and Satisfaction Single vs. Dual Monitors," conducted by SURL, Wichita State University and commissioned by Dell, October 2015.
6 TÜV Certified (ID0030051369-Flicker Free / ID0000051370-Low Blue Light Content). For more details, visit www.tuv.com.
7 For a copy of the Limited Hardware Warranty, write to Dell USA LP, Attn: Warranties, One Dell Way, Round Rock, TX 78682 or see dell.com/warranty.
8 Color gamut (typical) is based on CIE1976 (82%) and CIE1931 (72%) test standards.
9 Maximum power consumption with max luminance and contrast.
10 EPEAT Gold registered in the U.S. EPEAT registration varies by country. See www.epeat.net for registration status by country.

Dell.com/monitors Product availability varies by country. Please contact your Dell representative for more information.

v.1 06/2018

INSTANT SERVICES CO.,LTD

Quote Details

PowerEdge R740XD Server

8

Components

1	PowerEdge R740/R740XD Motherboard
1	Intel Xeon Silver 4110 2.1G, 8C/16T, 9.6GT/s , 11M Cache, Turbo, HT (85W) DDR4-2400
1	iDRAC Group Manager, Enabled
1	Chassis with up to 12x3.5" HDDs on BP, No Mid-Bay and 4x2.5" HDDs Flexbay, 1 or 2CPU Config
1	PowerEdge 2U LCD Bezel
1	Riser Config 1, 4 x8 slots
1	PowerEdge R740 Shipping Material
1	Quick Sync 2 (At-the-box mgmt)
1	2666MT/s RDIMMs
1	Performance Optimized
2	16GB RDIMM, 2666MT/s, Dual Rank
1	Blank for 1CPU Configuration
1	No Additional Processor
1	iDRAC9,Enterprise
1	Redundant SD Cards Enabled
2	16GB microSDHC/SDXC Card
1	IDSDM and Combo Card Reader
9	8TB 7.2K RPM NLSAS 12Gbps 512e 3.5in Hot-plug Hard Drive
3	240GB SSD SATA Mix Use 6Gbps 512e 2.5in Flex Bay Drive, S4600, 3 DWPD,1314 TBW
1	PERC H730P RAID Controller, 2GB NV Cache, Mini card
1	Standard 1U Heatsink
2	Deskside Power Cord, 250V,10A,2M,C13 (Thailand)
1	Dual, Hot-plug, Redundant Power Supply (1+1), 1100W
1	No Trusted Platform Module
1	PE R740XD Luggage Tag
2	Long Jumper Cord, C13-C14,4m,12a (APCC except ANZ)
1	Intel X550 2 Port 10Gb Base-T + I350 2 Port 1Gb Base-T, rNDC
1	Power Saving Dell Active Power Controller
1	ReadyRails Sliding Rails With Cable Management Arm
1	No RAID
1	OME Server Configuration Management

Software

1	6 Performance Fans forR740/740XD
1	Windows Server 2016 Standard,16CORE,Factory Installed, No Media,NO CAL
1	Windows Server 2016 Standard,16CORE,Media Kit
1	Windows Server 2016 Standard Edition,No Media;2012R2 Downgrade Media, Multi-Language
1	5-pack of Windows Server 2016,2012 USER CALs (Standard or Datacenter)
1	No Systems Documentation, No OpenManage DVD Kit
1	UEFI BIOS Boot Mode with GPT Partition

Service

1	Technical Support
1	Limited Warranty:Yr1-3 (Labor)
1	Limited Warranty:Yr1-3 (Parts)
1	3Yr ProSupport & Mission Critical: (7x24) 4-hour OnsiteService
1	Yr1-3 Mission Critical:(7x24) 4-hour OnsiteService
1	3Yr ProSupport & Mission Critical:(7x24) Technical Support & Assistance
1	No Remote Advisory Services Purchased

Precision 5820 Tower XCTO Base

18

Workstation 1, 2

Components

1	Intel Xeon W-2104 3.2GHz, 4C, 8.25M Cache, No Turbo, No HT, (120W) DDR4-2400
1	Boot drive or storage volume is greater than 2TB (select when 3TB/4TB HDD is ordered)
1	Precision 5820 Tower 425W Chassis
1	Slim ODD bezel, 100% tie with slim ODD
1	16GB (2x8GB) 2666MHz DDR4 RDIMM ECC — Workstation 3
4	No Hard Drive
1	2.5" 256GB SATA Class 20 Solid State Drive — Workstation 6
1	3.5" 4TB 5400rpm SATA Hard Drive
1	Integrated Intel AHCI SATA chipset controller (8x 6.0Gb/s), SW RAID 0,1,5,10
1	CPU Heatsink 5820 Tower
1	8x DVD+/-RW 9.5mm Optical Disk Drive — Workstation 8
1	Power Cord (Thai)
1	Regulatory Label, Dell Precision T5820 APCC,425W
1	NVIDIA Quadro P600, 2GB, 4 mDP (5820T) — Workstation 6
1	No Additional Network Card Selected (Integrated NIC included)
1	Dell Wired Mouse MS116 Black
1	Dell Entry Keyboard KB216 Black (Thailand)
1	Dell Developed Recovery Environment

1	SupportAssist
1	SATA/SAS Hard Drive/Solid State Drive
1	No Raid
1	Not selected in this configuration

Software

1	Cyberlink Software for Windows 8/10 without media
1	Precision T5820/T7820/T7920 Resource DVD
1	Windows 10 Pro for Workstations (up to 4 Cores) English
1	OS-Windows Media Not Included
1	Office 2013 Trial
1	Microsoft Office 30 Day Trial - Excludes Office License
1	No Out-of-Band Systems Management
1	Dell Applications for Windows
1	Dell Precision Optimizer

Service

1	No Installation Service Required
1	3Yr Technical Support
1	Limited Warranty:Yr1-3 (Labor)
1	Limited Warranty:Yr1-3 (Parts)
1	3Yr ProSupport:Next Business Day Onsite Service
1	3Yr ProSupport:(7x24) Technical Support & Assistance
1	No Dell ProSupport for Software, No DDPE Encryption SW

Dell 24 Monitor - P2419H

18
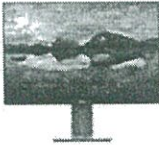
Components

1	Kit - Power Cord, 2m, 250V, 10A (Thailand)

Service

Workstation 10.7

1	Technical Support
1	Limited Warranty:Yr1-3 Premium Panel Warranty, Advanced Exchange Service
1	3Yr ProSupport:(7x24) Technical Support & Assistance
1	3Yr ProSupport:Premium Panel Warranty, Advanced Exchange Service

Dell Corporation (Thailand) Co., Ltd.
22nd Floor, Empire Tower
1 Sount Sathorn Road, Yannawa,
Sathorn, Bangkok 10120, THAILAND
Tel: (66 2) 670-7000
Fax: (66 2) 670-0029-30
Website: www.dell.com/ap/
Toll-Free Sales: 1800 006 009/0-2670-7200
Services: 1800 006 007/0-2670-7250

เรื่อง หนังสือรับรองผลิตภัณฑ์คอมพิวเตอร์ Client รุ่น Precision 5820

เรียน ประธานคณะกรรมการจัดซื้อจัดจ้าง

อ้างถึง เอกสารประกวดราคาซื้อด้วยวิธีอิเล็กทรอนิกส์ (e-bidding) เลขที่ กพ. บท. e-b 164/2561 ซื้อคอมพิวเตอร์ Server พร้อมติดตั้งจำนวน ๙ ชุด และคอมพิวเตอร์ Client จำนวน ๑๙ ชุด ตามประกาศวิทยุการบินแห่งประเทศไทย จำกัด

บริษัท เดลล์ คอร์ปอเรชั่น (ประเทศไทย) จำกัด ซึ่งได้รับอนุญาตอย่างถูกต้องตามกฎหมายให้เป็นบริษัท สาขาในประเทศไทยจาก Dell Corporation / Asia Pacific Customer Center ซึ่งมีสำนักงานใหญ่อยู่ที่ประเทศสหรัฐอเมริกา และมีโรงงานผลิตอยู่ในประเทศมาเลเซียมขอรับรองคุณสมบัติคอมพิวเตอร์ Client รุ่น Precision 5820 ภายใต้ยี่ห้อ Dell ดังนี้

ข้อ ๔. ระบบ Bios ของเครื่อง Computer Workstation ต้องมีเครื่องหมายการค้าเดียวกับผลิตภัณฑ์ที่นำเสนอ และต้องสามารถแสดงหมายเลขเครื่อง (Serial Number) ที่ตรงกับหมายเลขที่ติดมากับตัวเครื่อง Computer Workstation ได้

บริษัทฯ ขอรับรองว่าคอมพิวเตอร์ Workstation รุ่น Precision 5820 ที่เสนอตามโครงการดังกล่าว มีคุณสมบัติถูกต้องตามข้อกำหนดข้อ ๔ ทุกประการ

จึงเรียนมาเพื่อทราบและโปรดพิจารณา

ขอแสดงความนับถือ

(นายอโนทัย อาจารย์ภักดี)
กรรมการผู้มีอำนาจ

INSTANT SERVICES CO.,LTD.
บริษัท อินสแตนท์ เซอร์วิสเซส จำกัด

INSTANT SERVICES CO.,LTD.
บริษัท อินสแตนท์ เซอร์วิสเซส จำกัด

Dell Corporation (Thailand) Co., Ltd.
22nd Floor, Empire Tower
1 Sount Sathorn Road, Yannawa,
Sathorn, Bangkok 10120, THAILAND
Tel : (66 2) 670-7000
Fax : (66 2) 670-0029-30
Website : www.dell.com/ap/
Toll-Free Sales : 1800 006 009/0-2670-7200
Services : 1800 006 007/0-2670-7250

วันที่ 24 ธันวาคม 2561

เรื่อง หนังสือแต่งตั้งตัวแทนจำหน่ายและรับรองอุปกรณ์

เรียน ประธานคณะกรรมการจัดซื้อจัดจ้าง

อ้างถึง เอกสารประกวดราคาซื้อด้วยวิธีอิเล็กทรอนิกส์ (e-bidding) เลขที่ กพ. บท. e-b 164/2561 ซื้อคอมพิวเตอร์ Server พร้อมติดตั้ง จำนวน 8 ชุด และคอมพิวเตอร์ Client จำนวน 18 ชุด ตามประกาศบริษัท วิทยุการบินแห่งประเทศไทย จำกัด

บริษัท เดลล์ คอร์ปอเรชั่น (ประเทศไทย) จำกัด ซึ่งได้รับอนุญาตอย่างถูกต้องตามกฎหมายให้เป็นบริษัท สาขาใน ประเทศไทยจาก Dell Corporation / Asia Pacific Customer Center ซึ่งมีสำนักงานใหญ่อยู่ที่ประเทศสหรัฐอเมริกาและมี โรงงานผลิตอยู่ในประเทศมาเลเซียมีความยินดีเป็นอย่างยิ่งที่จะขอแต่งตั้ง

บริษัท อินสแตนท์ เซอร์วิสเซส จำกัด
2/10 ถ สุขาภิบาล.2 แขวงประเวศ
เขตประเวศ กรุงเทพฯ 10250

เป็นตัวแทนจำหน่ายและเป็นผู้ให้บริการหลังการขายเครื่องแม่ข่าย (Server) รุ่น PowerEdgeR740XD ภายใต้ยี่ห้อ DellEMC และ คอมพิวเตอร์ Client รุ่น Precision 5820 ภายใต้ยี่ห้อ Dell

โดยที่บริษัทฯ ยินดีให้การสนับสนุนทางด้านเทคนิคและบริการหลังการขาย ตลอดจนให้การสนับสนุน ให้โครงการนี้ ประสบความสำเร็จลุล่วงไปได้ด้วยดี และขอรับรองว่าอุปกรณ์ที่เสนอเป็นของใหม่ ไม่เคยใช้งานมาก่อน ไม่ใช่อุปกรณ์ที่นำมา ปรับสภาพใหม่ (Re-Conditioned) รุ่นที่เสนออยู่ในสายการผลิตปัจจุบัน และถูกต้องตามสเปคของทุกประการ

บริษัทฯ จะรับประกันความชำรุดบกพร่องของเครื่องคอมพิวเตอร์แม่ข่าย (Server) รุ่น PowerEdgeR740XD และ คอมพิวเตอร์ Client รุ่น Precision 5820 เป็นระยะเวลา 3 ปี

จึงเรียนมาเพื่อทราบและโปรดพิจารณา
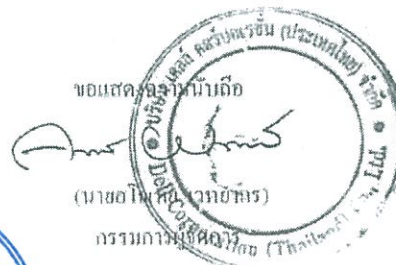
ขอแสดงความนับถือ

(นายอโณ ศ.. วทยากร)
กรรมการผู้จัดการ

INSTANT SERVICES CO.,LTD.
บริษัท อินสแตนท์ เซอร์วิสเซส จำกัด

ใบอนุญาตประกอบวิชาชีพวิศวกรรมควบคุม
ตามพระราชบัญญัติวิศวกร พ.ศ. ๒๕๔๒

ชื่อ-สกุล นายบวรโชติ เปลี่ยนพิจิตร
เลขบัตรประจำตัวประชาชน 3120600352161
ประกอบวิชาชีพวิศวกรรมควบคุมสาขา ไฟฟ้า งานไฟฟ้ากำลัง
ระดับ ภาคีวิศวกร เลขทะเบียน ภฟก 30077
วันที่ออกใบอนุญาต 11 ส.ค. 2557 วันสิ้นอายุ 10 ส.ค. 2562
ประเภทสมาชิก สามัญ เลขที่ 159813
วันออกบัตร 3 ส.ค. 2557 บัตรหมดอายุ 10 ส.ค. 2562

118554

Features	iDRAC8 Basic	iDRAC9 Basic	iDRAC8 Express	iDRAC9 Express	iDRAC8 Express for Blades	iDRAC9 Express for Blades	iDRAC8 Enterprise	iDRAC9 Enterprise
iDRAC Direct-Front panel USB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Connection View	No	Yes	No	Yes	No	Yes	No	Yes
NFS v4	No	Yes	No	Yes	No	Yes	No	Yes
NTLM v1 and NTLM v2	No	Yes	No	Yes	No	Yes	No	Yes
Security								
Role-based authority	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Local users	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SSL encryption	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IP blocking	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Directory services—AD, LDAP	No	No	No	No	No	No	Yes	Yes
Two-factor authentication	No	No	No	No	No	No	Yes	Yes
Single sign-on	No	No	No	No	No	No	Yes	Yes
PK authentication	No	No	Yes	Yes	Yes	Yes	Yes	Yes
FIPS 140-2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Secure UEFI boot-certificate management	No	Yes	No	Yes	No	Yes	No	Yes
Lock down mode	No		No	No	No	No	No	Yes
Unique iDRAC default password	No	Yes	No	Yes	No	Yes	No	Yes
Customizable Security Policy Banner-login page	No	Yes	No	Yes	No	Yes	No	Yes
Quick Sync 2.0-optional auth for read operations	No	Yes	No	Yes	No	Yes	No	Yes
Quick Sync 2.0-add mobile device number to LCL	No	Yes	No	Yes	No	Yes	No	Yes
Remote Presence								
Power control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Boot control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Serial-over-LAN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Virtual Media	No	No	No	No	Yes	Yes	Yes	Yes
Virtual Folders	No	No	No	No	No	No	Yes	Yes
Remote File Share	No	No	No	No	No	No	Yes	Yes
Virtual Console	No	No	No	No	Yes	Yes	Yes	Yes
HTML5 access to virtual console	No	No	No	No	Yes	Yes	Yes	Yes

DELL

INSTANT SERVICES CO.,LT.
บริษัท อินสแตนท์ เซอร์วิสเซส จำกัด

Features	iDRAC8 Basic	iDRAC9 Basic	iDRAC8 Express	iDRAC9 Express	iDRAC8 Express for Blades	iDRAC9 Express for Blades	iDRAC8 Enterprise	iDRAC9 Enterprise
VNC connection to OS	No	No	No	No	No	No	Yes	Yes
Quality/bandwidth control	No	No	No	No	No	No	Yes	Yes
Virtual Console collaboration—6 users	No	No	No	No	No	No	Yes	Yes
Virtual Console chat	No	No	No	No	No	No	Yes	Yes
Virtual Flash partitions	No	No	No	No	No	No	Yes	Yes
Group manager	No	No	No	No	No	No	No	Yes
HTTP/HTTPS support along with NFS/CIFS	No	Yes	No	Yes	No	Yes	No	Yes
Power and Thermal								
Real-time power meter	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Power thresholds & alerts	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Real-time power graphing	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Historical power counters	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Power capping	No	No	No	No	No	No	Yes	Yes
Power Center integration	No	No	No	No	No	No	Yes	Yes
Temperature monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Temperature graphing	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Health Monitoring								
Predictive failure monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SNMPv1, v2 and v3—traps and gets	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Email alerting	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Configurable thresholds	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fan monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Power Supply monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Memory monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CPU monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RAID monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NIC monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
HD monitoring—enclosure	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Out of Band Performance Monitoring	No	No	No	No	No	No	Yes	Yes
Alerts for excessive SSD wear	No	Yes	No	Yes	No	Yes	No	Yes

INSTANT SERVICES CO.,LTD
บริษัท อินสแตนท์ เซอร์วิสเซส จำกัด

64

DELL

Features	iDRAC8 Basic	iDRAC9 Basic	iDRAC8 Express	iDRAC9 Express	iDRAC8 Express for Blades	iDRAC9 Express for Blades	iDRAC8 Enterprise	iDRAC9 Enterprise
Customizable settings for Exhaust Temperature	No	Yes	No	Yes	No	Yes	No	Yes
Update								
Remote agent-free update	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Embedded update tools	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sync with repository—scheduled updates	No	No	No	No	No	No	Yes	Yes
Auto update	No	No	No	No	No	No	Yes	Yes
Improved PSU firmware updates	No	Yes	No	Yes	No	Yes	No	Yes
Deployment and Configuration								
Local configuration via F10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Embedded OS deployment tools	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Embedded configuration tools	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AutoDiscovery	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Remote OS deployment	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Embedded driver pack	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Full configuration inventory	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Inventory export	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Remote configuration	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Zerotouch configuration	No	No	No	No	No	No	Yes	Yes
System Retire/Repurpose	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Server Configuration Profile in GUI	No	Yes	No	Yes	No	Yes	No	Yes
Diagnostics, Service and Logging								
Embedded diagnostic tools	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Part Replacement	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Server Configuration Backup	No	No	No	No	No	No	Yes	Yes
Server Configuration Restore	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Easy Restore—system configuration	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Easy Restore Auto Timeout	No	Yes	No	Yes	No	Yes	No	Yes

Bangkok Bank
ธนาคารกรุงเทพ

หนังสือค้ำประกัน
Letter of Guarantee

No. **1451147**

หนังสือค้ำประกันเลขที่ 02139191000096　　　　　　　　　　　วันที่ 28 กุมภาพันธ์ 2562

ข้าพเจ้า ธนาคารกรุงเทพ จำกัด (มหาชน) สำนักงานตั้งอยู่เลขที่ 333 ถนนสีลม แขวงสีลม เขตบางรัก กรุงเทพมหานคร โดย นางสาวกรรณิการ์ พิภักดิ์สมุทร 4633 และ นายยรรยง ดำเกิงประเสริฐกุล 5506 ผู้มีอำนาจลงนาม ผูกพันธนาคาร ขอทำหนังสือค้ำประกันฉบับนี้ไว้ต่อ บริษัท วิทยุการบินแห่งประเทศไทย จำกัด

ซึ่งต่อไปนี้เรียกว่า "ผู้ซื้อ" ดังมีข้อความต่อไปนี้

　　　1.ตามที่ บริษัท อินสแตนท์เซอร์วิสเซส จำกัด

ซึ่งต่อไปนี้เรียกว่า "ผู้ขาย" ได้ทำสัญญาซื้อขาย คอมพิวเตอร์ Server พร้อมติดตั้ง จำนวน 8 ชุด และคอมพิวเตอร์ Client จำนวน 18 ชุด สำหรับใช้ในระบบโทรทัศน์วงจรปิด (CCTV)

กับผู้ซื้อ ตามสัญญาเลขที่ กพ.บท.ช.0037/2562　　　　　　　ลงวันที่　　　　　　　　　　　

ซึ่งผู้ขายต้องวางหลักประกันการปฏิบัติตามสัญญาต่อผู้ซื้อ เป็นจำนวนเงิน –206,550.00–　　　　　　บาท

(–สองแสนหกพันห้าร้อยห้าสิบบาทถ้วน–　　　　　　　　　　　　　　　　　　　　　）

ซึ่งเท่ากับร้อยละ　　ห้า　　(5%) ของมูลค่าทั้งหมดของสัญญา

　　　ข้าพเจ้ายินยอมผูกพันตนโดยไม่มีเงื่อนไขที่จะค้ำประกันในการชำระเงินให้ตามสิทธิเรียกร้องของผู้ซื้อ จำนวนไม่เกิน –206,550.00–　　　　　บาท (–สองแสนหกพันห้าร้อยห้าสิบบาทถ้วน–　　　　　　　　　　　　　）

ในฐานะเป็นลูกหนี้ร่วม ในกรณีที่ผู้ขายก่อให้เกิดความเสียหายใด ๆ หรือต้องชำระค่าปรับ หรือค่าใช้จ่ายใด ๆ หรือผู้ขายมิได้ปฏิบัติ ตามภาระหน้าที่ใด ๆ ที่กำหนดในสัญญาดังกล่าวข้างต้น ทั้งนี้ โดยผู้ซื้อไม่จำเป็นต้องเรียกร้องให้ผู้ขายชำระหนี้นั้นก่อน

　　　2.หนังสือค้ำประกันนี้มีผลใช้บังคับตั้งแต่วันทำสัญญาซื้อขายดังกล่าวข้างต้นจนถึงวันที่　　　　　　　　　13 เมษายน 2565　　　　　และข้าพเจ้าจะไม่เพิกถอนการค้ำประกันภายในระยะเวลาที่กำหนดไว้

　　　3.หากผู้ซื้อได้ขยายระยะเวลาให้แก่ผู้ขาย ให้ถือว่าข้าพเจ้ายินยอมในกรณีนั้น ๆ ด้วย โดยให้ขยายระยะเวลาการ ค้ำประกันนี้ออกไปตลอดระยะเวลาที่ผู้ซื้อได้ขยายระยะเวลาให้แก่ผู้ขายดังกล่าวข้างต้น

　　　ข้าพเจ้าได้ลงนามไว้ต่อหน้าพยานเป็นสำคัญ

ลงชื่อ　　กรรณิการ์ พิภักดิ์สมุทร　　　　　　　　　　　　　　　ผู้ค้ำประกัน
　　（ นางสาวกรรณิการ์ พิภักดิ์สมุทร 4633 ）　　（ นายยรรยง ดำเกิงประเสริฐกุล 5506 ）
　　　　เจ้าหน้าที่ผู้รับมอบอำนาจ　　　　　　　　　　เจ้าหน้าที่ผู้รับมอบอำนาจ

ลงชื่อ　　ศุภิสรา　　　พยาน　ลงชื่อ　　กฤชฐ์　　　พยาน
　（ ศุภิสรา พรร์พัฒนไพศาลกุล ）　　（ 　 　 ）