

DeltaV™ Workstation and Server Hardware



The DeltaV™ Operator Workstations are available to support multiple versions of DeltaV Systems.

- Pre-installed Operating System (O/S) software for ease of deployment
- Available with Windows 10 IoT Enterprise 2016 LTSB, and Server 2016 64-bit
- Easy control network installation; all network cards pre-installed and ready to plug and play
- Choice of client and server workstation hardware to optimize your cost/performance
- Choices for tower and rack-mount computers including RAID drive options
- Supports single, dual, and quad monitors

Introduction

DeltaV™ software runs on a specific configuration of supported Dell Intel-based computers. Workstation hardware supports single, dual, or quad monitors. Server hardware supports a single monitor. The selection of DeltaV workstation and server hardware provides the platform you need to engineer your control strategy and operate your process.

DeltaV workstations on a specific set of preselected Dell computer hardware specifically chosen to provide the best cost performance solution for your DeltaV system.

We have pre-tested the DeltaV system with both the hardware configuration and the O/S configuration for your DeltaV System. This will enable you to more efficiently setup, engineer, and troubleshoot a DeltaV system. In turn you can focus on your process control functions.

Benefits

Pre-installed software. When ordered through a DeltaV system integrator that can pre-load the correct DeltaV software version, the pre-loaded workstation, monitor, keyboard, and mouse are delivered ready to plug and play in your DeltaV system. This is hassle-free hardware delivery. No third-party interfaces, compatibility problems, or software versions to worry you.

Easy control network installation. The workstation ships from the factory with the appropriate DeltaV control network cards pre-installed — no cases to open or network drivers to set up. Just plug a control network segment into the workstation and the other end into the DeltaV control area network (CAN), and you have just set up a new DeltaV network node.

Choose between PCs and servers to provide the best solution. Match our options with your requirements for towers, servers, dual monitors, and RAID storage. Some systems are served well with PC workstations. While servers provide higher level of performance for large systems.

Operating System is pre-loaded. Based on your DeltaV version the operating system is installed and configured for you. DeltaV v13.3 and higher can only be installed on a 64-bit O/S. Move up to a Windows 64-bit O/S for both workstations and servers. Workstations and servers running Windows 10 IoT Enterprise 2016 LTSB and Sever 2016 O/Ss can only be used with DeltaV v13.3.1 and higher.

Product Description

The workstation hardware described in this document is subject to improvements at any time. It is the policy of Emerson to ship workstation hardware that is current with industry standards.

We want you to enjoy the benefits of the increasing performance inherent with using state-of-the-art equipment. We perform testing on DeltaV systems to help mitigate the risks associated with the platform.

Workstation and Server Hardware

Secure data and fast recovery from hard drive failures. Workstations with RAID1 drives provide higher availability and fast recovery from failures. Servers in RAID 1 and RAID 10 configurations increase data protection and help enhance the performance of the server.

Crystal clear video. DeltaV software works at 1024 x 768, 1280 x1024, 1680 x1050 (DeltaV v10.3 and later), or 1920 x1080 (DeltaV v13.3 and later) pixel resolution. DeltaV servers do not support 1920 x1080 resolution. Please see monitors section for details. You can increase your viewing space with dual monitors or quad monitors.

Alarm annunciation. Audible alarms use the on-board sound cards included on the motherboards of all operator workstations. (Sound is not available on server-class computers.)

Legendary support. Emerson consistently receives top honors in service from our customers. This service is extended with a variety of optional support plans.

Communications redundancy. The DeltaV system is solid, secure, and safe. The DeltaV control network is redundant, and the workstations are equipped to take advantage of this redundancy.

System backups. All workstations include a DVD-RW drive that can be used for storing backup data.

Monitor options. Choose standard or widescreen flat panel monitors to display your process graphics. Choose dual or quad monitors for maximum viewing area.

Monitor Specifications

The DeltaV v11.3.1 and newer systems support widescreen monitors with a 16:10 aspect ratio up to 1680x1050 resolution.

The DeltaV v13.3 and newer systems support widescreen monitors with a 16:9 aspect ratio up to 1920x1080 resolution.

The DeltaV system also supports a 19" monitor (5:4 aspect ratio 1280x1024 resolution only) on workstations and servers.

Wide screen monitors are supported on all DeltaV Workstations including server class computers as noted below.

Wide screen monitors must be connected to the computer prior to making wide screen resolution selections.

Beginning in DeltaV v14.3.1, there are two applications for Operator Interface. **DeltaV Operate** supports 16:10 and 16:9 aspect ratios to a resolution of 1920x1080 in single, dual or quad screen layouts. Dedicated cables are required for each screen. **DeltaV Live** utilizes scalable vector graphics and HTML5 technologies, making it aspect and resolution independent.

Any monitor that can be detected by the Windows operating system may be used with DeltaV Live. Complementary applications (for example, Process History View, Alarm Help, Control Studio Online) can be launched from DeltaV Live and behave as normal Windows programs. For detailed setup instructions, please consult Knowledge Base Article AK-1700-0069.

NOTE: The on-board video of servers may not support the same wide screen resolutions or aspect ratios as non-server workstations.

Order Number	DeltaV Compatibility	Description	Warranty
SE2812	>=13.3.1	24-inch LED Widescreen Monitor - Dell Monitor P2421; 16:10 Aspect Ratio; 1920x1200@60Hz Resolution; VGA/DVI/DP/HDMI Cables included: 1 DP and 1 USB	3 year
SE2813 (NEW)	>=13.3.1	22-inch LED Widescreen Monitor - Dell Monitor P2219H; 16:9 Aspect Ratio; 1920x1080@60Hz Resolution; DP/HDMI/VGA/USB Cables included: 1 DP and 1 USB	3 year
SE2807	>=13.3.1	19-Inch LED Monitor - Dell Monitor P1917S; 5:4 Aspect Ratio; 1280x1024@60Hz Resolution; VGA/HDMI/DP Cables included: 1 VGA, 1 DP, and 1 USB	3 year
SE2810	>=13.3.1	24-inch LED Widescreen Monitor - Dell Monitor P2419H; 16:9 Aspect Ratio; 1920x1080@60Hz Resolution; VGA/HDMI/DP Cables included: 1 DP and 1 USB NOTE: DeltaV T640/R740 based servers do not support 1080p	3 year
SE2811	>=13.3.1	43-inch LED Ultra HD 4K Quad Monitor - Dell Monitor U4320Q; Connect up to four independent clients to a single monitor; 16:9 Aspect Ratio; 3840 x 2160 at 60 Hz (HDMI & DP only) Resolution; 2xHDMI / 2xDP Cables included: 1 HDMI, 1 DP, 1 USB C (C to A), and 1 USB C (C to C)	3 year

Monitor physical appearances change periodically and without notice from monitor suppliers. We cannot guarantee that physically compatible monitors will be available at all times. If you require that any spare or replacement monitors be physically compatible with installed monitors, then spare or replacement monitors must all be ordered at the same time the initial workstation is ordered.

Touch screen is supported on DeltaV workstations however touch screen monitors are no longer supported as a standard offering. Monitors selected for touchscreen should match the aspect ratio and Optimal resolution of the supported monitors.

Specifications Common to all Computers (applies to all computers with exceptions noted under computer specifications)

Please refer to the Emerson Product Support Guidelines for complete details on available DeltaV Workstation hardware and software support. Consult our local Emerson support office or representative or visit us at <http://www.emerson.com/deltav>.

All computers must be installed in a dust-free, contaminant-free environment. These computers are not suitable for mounting in industrial environments unless they are mounted in enclosures that provide the necessary dust-free and contaminant-free environment. Environment must meet **Class G1** level for airborne contaminants per the ISA standard **ISA-71.04-1985, Environmental Conditions for Process Measurement and Control Systems: Airborne Contaminants**.

It is the responsibility of the user to insure their environment is compatible with G1. Due to compliance to RoHS requirements newer computers may not survive in the same environment as older models. If there is any chance of sulfur in the environment, computers must be protected in environmental enclosures or relocated to a sulfur-free environment.

Temperature: Operating and storage temperature ranges vary per model

Relative humidity: Ranges vary per model

EMI: DeltaV workstations, servers and associated components are classified as Information Technology Equipment. This equipment is typically installed in control rooms with Class 1 environments unless the specifications in this document state an exception. The equipment complies with standard EN55022 Class A or Class B for emissions and standard EN50082-1.1992 for immunity. Please refer to DeltaV Site Prep Manual for more information.

Altitude: Operating –15.2 to 3048 m (–50 to 10,000 ft.), Storage –15.2 to 10,668 m (–50 to 35,000 ft.)

Computer restore image: All computers come with an O/S restore image DVD for fast recovery of the O/S when restoring a computer. O/S install disks are not provided.

Servers intended for embedded applications. ‘embedded application’ means a software application that permanently resides in an industrial or consumer device, typically stored in a non-volatile memory such as read-only memory or flash memory, or Server intended for use as appliances. ‘server appliance’ means a server that is not intended to execute user-supplied software, delivers services through one of more networks, is typically managed through a web or command line interface and is bundled with a pre-installed OS and application software that is used to perform a dedicated function or set of tightly coupled functions.

Note on the use of Uninterruptible Power Supply (UPS) with DeltaV Workstations

For workstations and servers that will be used as a DeltaV ProfessionalPlus Workstation, the use of a UPS is **required to prevent possible database corruption due to a sudden power loss** on the ProfessionalPlus.

In addition, it is strongly suggested that all DeltaV Workstations including Operator workstations be connected to a UPS system to prevent possible corruption of the O/S, DeltaV software, or other data (such as historians) during a sudden power loss. Critical devices on the DeltaV network should always be protected by the use of a UPS system from possible damage due to sudden power loss.

DeltaV Single Monitor Workstation [based on Dell Optiplex XE3 workstation] Recommended with DeltaV Discovery

Model #	O/S	DeltaV Compatibility	Warranty
SE2606C01	Windows 10 lot Enterprise 2016 LTSB	DeltaV v13.3.1 and newer	5 Year

- Small form factor chassis
- 5 Network Interface Ports
- 3.1 USB ports: 5 ports - 1 front and 4 rear / 2.0 USB ports: 4 ports - 2 front and 2 rear
- Intel i7 8700, Six Core Processor, 3.2 GHz
- Memory: 16GB
- Drive: 512GB Solid State Drive (SSD)
- 8x DVD +/- RW Drive, Small Form Factor
- On-board integrated audio
- On-board integrated graphics – Single Monitor
- USB optical mouse (2 button w/scroll)
- External speaker
- USB local country keyboard
- Local power cord option
- Dimensions (H x W x D) Inches / (cm): 11.4”x 3.7 “x 11.5” (29 x 9.3 x 29.2)
- Weight: 11.6 lbs / 5.3 kg.
- Power supply Unit (PSU): 300W up to 90% efficient PSU (80Plus Bronze)
- Temperature: 5°C to 45°C (41°F to 113°F) Storage -40°C to 65°C (-40°F to 149°F)
- Relative Humidity: Operating/ Storage 20% to 80% (non-condensing)
- Please see Dell Optiplex XE3 documentation for detailed environmental specifications.
- The SE2606C01 ships with Windows 10 lot Enterprise 2016 LTSB 64-bit installed and includes recovery image USB. This computer will support both English and non-English versions of DeltaV software and includes the language packs required for installing a localized non-English version of DeltaV.



SE2607KIT-1 Marine Certified (DNV GL) AC Power Line EMI Filter

- Maximum Ratings: 250VAC RMS 50/60Hz; 10A RMS
- Leakage Current: <3.5mA
- Dimensions: 7”x 6.15”x 3.3” (178mm x 156mm x 84mm)
- Power Indication: LED
- Inlet: IEC320-C20
- Outlet: Schuko
- Ambient temperature at the place of installation should not exceed the range of 5°C - 40°C



DeltaV Dual/Quad Monitor Workstation [based on Dell Precision T5820XL workstation]			
Model #	O/S	DeltaV Compatibility	Warranty
SE2612CXX	Windows 10 lot Enterprise 2016 LTSB Installed with the option to migrate to Windows 7 Pro Embedded 64-Bit in the field.	DeltaV v12.3.1 and newer	5 Year

- 3 Network Interface Ports
- 3.1 USB ports: 10 ports - 4 front and 6 rear
- Intel® Xeon® W-2123 3.6 GHZ, 4-Core processor
- Memory: 16GB
- 8x DVD +/- RW Slimline Drive
- On-board integrated audio
- Video: Radeon Pro WX5100, 8GB Quad Monitor Graphics Card

NOTE: Supports (4) 4K monitors

- 4x Display ports. No adapters are included. There are no VGA ports available on the video card. If VGA outputs are required a DisplayPort to VGA adaptor must be purchased locally.
- External speaker
- USB optical mouse (2 button w/scroll)
- Local USB country keyboard (for languages supported)
- Local power cord option
- Chassis: Convertible Mini-tower
- (H x W x D): 16.45" x 6.94" x 20.41" (H x W x D): 41.79cm x 17.65cm x 51.83cm
- Weight: 32 lbs. / 14.52 kg.
- Power—950-watt power supply
- Temperature: Operating 5°C to 35°C (41°F to 95°F) Storage -40°C to 65°C (-40°F to 149°F)
- Relative Humidity: Operating 8% to 85% (non-condensing) Storage 5% to 90% (non-condensing)
- The SE2612C01/C02 ships with Windows 10 lot Enterprise 2016 LTSB 64-bit installed and includes recovery image USB to migrate the workstation to Windows 7 Pro Embedded 64-bit in the field. This computer will support both English and non-English versions of DeltaV software and includes the language packs required for installing a localized non-English version of DeltaV DCS.
- This unit does not come with a Windows 10 or 7 O/S reinstall DVD or USB. The recovery image USBs are the only method available to reinstall the O/S on this computer. Note that this computer does not support the Windows XP or Win 7 32bit O/S.



SE2612C01 - Dual/Quad Monitor Workstation
<ul style="list-style-type: none"> ■ Drives: One 500GB 7200rpm SATA, 2.5", No RAID
SE2612C02 - Dual/Quad Monitor Workstation
<ul style="list-style-type: none"> ■ Drives: 2x 500GB 7200rpm SATA, 2.5", RAID 1 ■ MegaRAID SAS 9460-16i 12Gb/s PCIe SATA/SAS HW RAID controller

DeltaV Rack Mount Single/Dual/Quad Monitor Workstation [based on Dell Precision R7920XL workstation]			
Model #	O/S	DeltaV Compatibility	Warranty
SE2613C04	Windows 10 lot Enterprise 2016 LTSB	DeltaV v13.3.1 and newer	5 Year
<ul style="list-style-type: none"> ■ 4 Network Interface Ports ■ 5 USB ports: USB 3.0 - 1 front / 2 rear, USB 2.0 - 2 front ■ CPU: Intel Xeon Silver 4112 2.6GHz, 4 Core processor ■ Memory: 16GB ■ Drives: 2x- 500GB 2.5" SATA 7200rpm ■ in a RAID1 configuration (H730p+RAID controller) ■ 8x DVD +/- RW Slimline Drive ■ Audio: Creative Sound Blaster Audigy ■ Video: Radeon Pro WX5100, includes (4) 3ft DP to DP cables, and (1) 6ft DP to DP cable. <p>NOTE: Supports (4) 4K monitors</p> <ul style="list-style-type: none"> ■ TERA2 Card <p>NOTE: The TERA2 card supports but does not include SE2500KIT-3, the Wyse 5030 (P25) PCoIP Zero Client KVM Extender for dual monitors or SE2500KIT-5, the Amulet Hotkey (DXZ4) PCoIP Zero Client KVM Extender for quad monitors. See the Wyse 5030 (P25) and Amulet Hotkey (DXZ4) specs below.</p> <ul style="list-style-type: none"> ■ External speaker ■ USB optical mouse (2 button w/scroll), local USB country keyboard, local power cord option ■ Rack Rails: Rack chassis with ReadyRails and Cable Management Arm ■ Chassis: 2U rack mount ■ Height: 3.42 in (8.68cm), Width: 18.98in (48.2 cm), Depth: with front bezel 29.58 in (75.13cm) ■ Weight (minimum): With front bezel 63.05 lbs. / 28.6 kg. ■ Power supply: dual redundant power supplies (hot swappable). Each supply 1600W dissipation for 1600W power supply: 6000 BTU/hr. with 10 amp power cables. ■ Temperature: Operating 10°C to 35°C (50°F to 95°F) Storage -40°C to 65°C (-40°F to 149°F) ■ Relative Humidity: Operating/Storage 10% to 80% (non-condensing) Maximum dew point temperature = 29°C ■ Please see Dell R7920 documentation for detailed environmental specifications ■ The SE2613C04 ships with Windows 10 lot Enterprise 2016 LTSB 64-bit installed and includes recovery image USB. This computer will support both English and non-English versions of DeltaV software and includes the language packs required for installing a localized non-English version of DeltaV. ■ This unit does not come with a Windows 10 reinstall USB. The recovery image USBs are the only method available to reinstall the O/S on this computer. Note that this computer does not support the Windows XP or Win 7 64bit & 32bit O/S. 			



NEW - DeltaV Operator Panel (Industrial Panel Mounted PC)			
Model #	Description	DeltaV Compatibility	Warranty
SE2631C01	15" Touchscreen Monitor, 1920x1080 HD Resolution; 8GB RAM; 256GB SSD Drive	DeltaV v14.FP2 and newer	2 Year ¹
SE2631C02	15" Touchscreen Monitor, 1920x1080 HD Resolution; 16GB RAM; 512GB SSD Drive; Recommended with DeltaV Live	DeltaV v14.FP2 and newer	2 Year ¹
SE2632C01	19" Touchscreen Monitor, 1920x1080 HD Resolution; 8GB RAM; 256GB SSD Drive	DeltaV v14.FP2 and newer	2 Year ¹
SE2632C02	19" Touchscreen Monitor, 1920x1080 HD Resolution; 16GB RAM; 512GB SSD Drive; Recommended with DeltaV Live	DeltaV v14.FP2 and newer	2 Year ¹
SE2633C01	24" Touchscreen Monitor, 1920x1080 HD Resolution; 8GB RAM; 256GB SSD Drive	DeltaV v14.FP2 and newer	2 Year ¹
SE2633C02	24" Touchscreen Monitor, 1920x1080 HD Resolution; 16GB RAM; 512GB SSD Drive; Recommended with DeltaV Live	DeltaV v14.FP2 and newer	2 Year ¹
SE2634W3YREXT	3 Year Warranty Extension from 2 to 5 Years. ¹ Must be purchased on same order with the DeltaV Operator Panel.	DeltaV v14.FP2 and newer	3 Year Warranty Extension

- AMD Ryzen V1404I 2.00 GHz Processor*
- Memory: See Table Above
- Drive: See Table Above
- 4xEthernet interface ports; 10/100/1000 Mbps
- 2xUSB 2.0 and 2xUSB 3.0
- Audio out
- Single Touchscreen LCD Display; See Table for display size and resolution Backlit LCD with 10-point projective capacitive touch screen Panel mounted, IP-66 protection at front, IP-20 at back
- No keyboard/mouse included.
- No DVD drive included.
- Dimensions (W x H x D) Inches / (mm) and Weight
 - With 15-in. display – 16.15"/410.2mm x 10.14"/257.6mm x 4.06"/103mm and 15.43 lbs/7.0 kg
 - With 19-in. display – 19.69"/500mm x 12.40"/315mm x 4.25"/108mm and 19.84 lbs/9.0 kg
 - With 24-in. display – 23.62"/600mm x 15.04"/382mm x 4.25"/108mm and 24.25 lbs/11.0 kg
- Power supply: 24 VDC power; Removable 3-Pin screw-type connector
 - Recommend VE5138 5A Industrial Power Supply
- Ambient operating temperature: -20°C ... 65°C
- Vibration: Vibration resistance according to EN 60068-2-6, 1G
- Shock: Shock test according to IEC 60068-2-27, 10G with 11 ms impulse
- This equipment is suitable for use in Class I Division 2 (Groups A, B, C, D), Class II Division 2, Class 3 Division 1, ATEX/IEC EX Zone 2 and Zone 22 or non-hazardous locations only. Marine Certified: DNV GL, ABS, BV, LR
- The SE2631C01/C02, SE2632C01/C02, & SE2633C01/C02 ships with Windows 10 IoT Enterprise 2019 LTSC 64-bit installed. Recovery image is downloadable on <https://guardian.emerson.com>. This computer will support both English and non-English versions of DeltaV software and includes the language packs required for installing a localized non-English version of DeltaV DCS.



*Due to the relatively slower processor in the DeltaV Operator Panel, DeltaV Live display call-up times may be 1-2s slower than what is observed on other DeltaV workstations.

Please see next page for current and power data table.

DeltaV Operator Panel (Industrial Panel Mounted PC)			
Current and Power Data	With 15-in. display	With 19-in. display	With 24-in. display
Current consumption @24 V, maximum	2.17 A	2.08 A	2.67 A
Power, maximum, @24	52W	50 W	64 W
■ Windows 10 lot Enterprise 2019 LTSC 64-bit installed			

DeltaV Operator Panel (Industrial Panel Mounted PC)			
Model #	Description	DeltaV Compatibility	Warranty
SE2616C01	15.6" Touchscreen Monitor, 1366x768 Resolution; 8GB RAM; 240GB SSD Drive	DeltaV v14.3 and newer	2 Year ¹
SE2616C02	15.6" Touchscreen Monitor, 1366x768 Resolution; 16GB RAM; 480GB SSD Drive; Recommended with DeltaV Live	DeltaV v14.3 and newer	2 Year ¹
SE2617C01	18.5" Touchscreen Monitor, 1366x768 Resolution; 8GB RAM; 240GB SSD Drive	DeltaV v14.3 and newer	2 Year ¹
SE2617C02	18.5" Touchscreen Monitor, 1366x768 Resolution; 16GB RAM; 480GB SSD Drive; Recommended with DeltaV Live	DeltaV v14.3 and newer	2 Year ¹
SE2618C01	21.5" Touchscreen Monitor, 1920x1080 FHD Resolution; 8GB RAM; 240GB SSD Drive	DeltaV v14.3 and newer	2 Year ¹
SE2618C02	21.5" Touchscreen Monitor, 1920x1080 FHD Resolution; 16GB RAM; 480GB SSD Drive; Recommended with DeltaV Live	DeltaV v14.3 and newer	2 Year ¹
SE2619W3YREXT	3 Year Warranty Extension from 2 to 5 Years. ¹ Must be purchased on same order with the DeltaV Operator Panel.	DeltaV v14.3 and newer	3 Year Warranty Extension

- Intel i7-6822EQ 2.00 GHz Processor*
- Memory: See Table Above
- Drive: See Table Above
- 4xEthernet interface ports; 10/100/1000 Mbps
- 2xUSB 2.0 and 2xUSB 3.0
- Audio out
- Single Touchscreen LED Display; See Table for display size and resolution
Backlit LED with 10-point projective capacitive touch screen Panel mounted, IP-65 protection at front, IP-30 at back
- No keyboard/mouse included.
- No DVD drive included.
- Dimensions (W x H x D) Inches / (cm) and Weight
With 15.6-in. display – 16.06"/408mm x 10.83"/275mm x 4.76"/121mm and 18.96 lbs/8.6 kg
With 18.5-in. display – 18.31"/465mm x 12.32"/313mm x 4.84"/123mm and 22.93 lbs/10.4 kg
With 21.5-in. display – 20.94"/532mm x 13.94"/354mm x 4.69"/119mm and 27.99 lbs/12.7 kg
- Power supply: 24 VDC power; Removable COMBICON screw-type connector
- Ambient operating temperature: -20°C ... 60°C
- Vibration: Vibration resistance according to EN 60068-2-6, 1G
- Shock: Shock test according to IEC 60068-2-27, 15g with 11 ms impulse
- This equipment is suitable for use in Class I, Division 2, Groups A, B, C, D, ATEX/IEC EX Zone 2 and Zone 22 or non-hazardous locations only.
- The SE2616C01/C02, SE2617C01/C02, & SE2618C01/C02 ships with Windows 10 lot Enterprise 2016 LTSB 64-bit installed and includes recovery image USB. This computer will support both English and non-English versions of DeltaV software and includes the language packs required for installing a localized non-English version of DeltaV DCS.




*Due to the relatively slower processor in the DeltaV Operator Panel, DeltaV Live display call-up times may be 1-2s slower than what is observed on other DeltaV workstations.

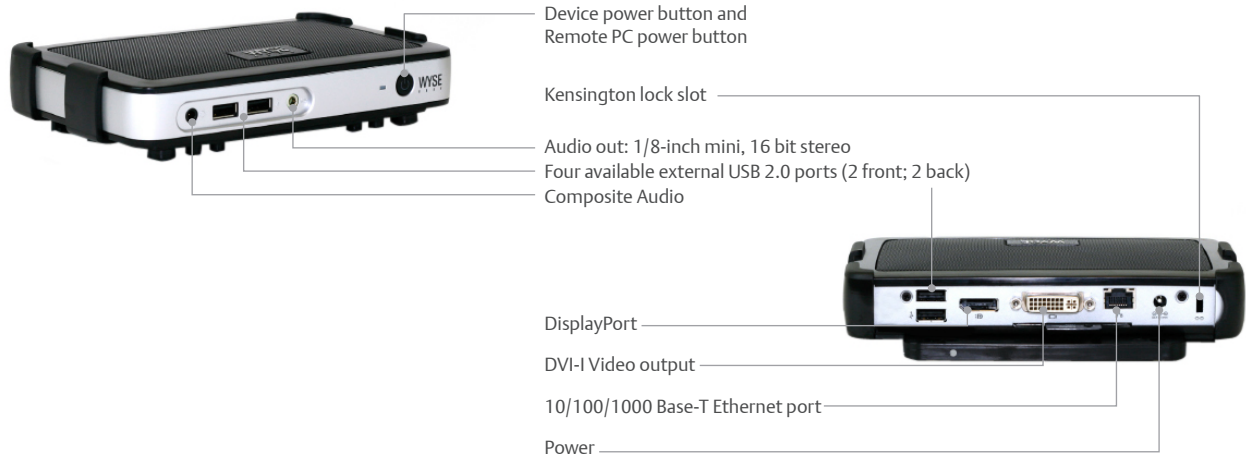
Please see next page for current and power data table.

DeltaV Operator Panel (Industrial Panel Mounted PC)			
Current and Power Data	With 15.6-in. display	With 18.5-in. display	With 21.5-in. display
Current consumption @24 V, maximum	1.89 A	1.89 A	1.89 A
Power, maximum, @24	45.4 W	45.4 W	45.4 W
■ Windows 10 Enterprise 2016 LTSB 64-bit installed			

DeltaV Rugged Laptop – PK Controller Engineering Laptop [based on Dell Latitude 14” Rugged 5420]			
Model #	O/S	DeltaV Compatibility	Warranty
SE2615C01	Windows 10 lot Enterprise 2016 LTSB	DeltaV v14.3 and newer	5 Year

<ul style="list-style-type: none"> ■ 14” Rugged Laptop ■ 1 Network Interface Ports ■ 3.1 USB ports: 3 ports - 2 left side and 1 right side ■ Intel Dual-Band Wi-Fi Adapter ■ Intel Core i7-8650U Processor, Quad-Core, 1.9GHz ■ Memory: 16.0GB ■ Drives: 512GB Solid State Drive (SSD) ■ No DVD drive included ■ On-board integrated audio ■ Intel Graphics 620, 1920x1080, Outdoor Readable, Non-touch ■ Integrated touchpad ■ Sealed Internal RGB Backlit English Keyboard ■ 2 3-cell (51Wh) Lithium Ion Battery ■ 90W AC Adapter ■ Dimensions (H x W x D) Inches/(mm) : 13.67” x 9.56” x 1.29” / (34.70 x 24.30 x 3.28) ■ Weight: 4.9 lbs / 2.2 kg (without handle and bumpers) ■ MIL-STD-810G testing1: Transit drop (36”), blowing dust, vibration, functional shock, humidity, altitude, thermal extremes ■ Temperature: Operating -29°C to 60°C (-20°F to 140°F) Storage -51°C to 7°C (-60°F to 160°F) ■ Relative Humidity: Operating 10% to 80% (non-condensing) Maximum dew point temperature = 26°C Storage 10% to 95% (non-condensing) Maximum dew point temperature = 33°C ■ IEC 60529 ingress protection1: IP52 (dust-protected, protected against dripping water when tilted up to 15°) ■ (1) Based on testing and certification to MIL-STD-810G, IEC 60529 standards, performed and reported independently by accredited testing companies. ■ The SE2615C01 ships with Windows 10 lot Enterprise 2016 LTSB 64-bit installed and includes a recovery image USB. ■ This unit does not come with a Windows 10 reinstall USB. The recovery image USB is the only method available to reinstall the O/S on this computer. 	
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SE2500KIT-3 —Wyse® 5030 (P25) PCoIP Zero Client.



I/O Peripheral Support	Single Link DVI-I port, One DisplayPort (1 DisplayPort to DVI adapter included) Four External USB 2.0 ports (2 front; 2 back)
Button / LEDs	Multi-Function power button LED
Networking	10/100/1000 Base-T Gigabit Ethernet
Display	VESA monitor support with Display Data Control (DDC) for automatic setting of resolution and refresh rate
Audio	Composite Audio 1/8-inch mini jack, One Line out / speaker 1/8-inch mini jack
Physical Characteristics	Height: 1.14 inches (29 mm) Width: 6.97 inches (177 mm) Depth: 4.57 inches (116 mm)
Shipping Weight	8.15 lbs. / 3.7 kg.
Mounting	Horizontal feet standard
Device Security	Built-in Kensington security slot (cable sold separately)
Power	Worldwide auto-sensing 100-240 V AC, 50/60 Hz. power supply Average power usage with device connected to 1 keyboard with 1 mouse and 1 monitor: less than 8 watts
Temperature Range	Operating: 32° to 104°F (10° to 40°C), horizontal and vertical positions Storage: 14° to 140°F (-10° to 60°C)
Humidity	20% to 80% condensing, 10% to 95% non-condensing
Warranty	3 year

SE2500KIT-5 —Amulet Hotkey (DXZ4) PCoIP Zero Client.



I/O Peripheral Support	Four DisplayPort ports, Four External USB 2.0 ports (2 front, 2 back)
Button / LEDs	Multi-Function power button LED
Networking	Dual redundant RJ45 10/100/1000 Base-T Gigabit Ethernet
Display	Four monitors up to 1920 x 1200 maximum @ 60Hz
Audio	Stereo headphone 3.5mm jack Stereo microphone input 3.5mm jack Stereo line out 3.5mm jack
Physical Characteristics	Height x Width x Depth: 34 mm x 230 mm x 130 mm (1.3 in x 9.1 in x 5.1 in) Weight 0.9kg / 2 lbs.
Device Security	Built-in Kensington security slot (cable sold separately)
Power	Less than 12W nominal (excluding USB devices)
Temperature Range	Operating: 59° to 104°F (15° to 40°C) Storage: 14° to 140°F (-10° to 60°C)
Warranty	3 year

Wyse 5030 (P25) / Amulet Hotkey (DXZ4) KVM Installation Note:


Dell recommends using a Gigabit Ethernet switch between PC with the Terra-2 card and the Wyse 5030 (P25) / Amulet Hotkey (DXZ4) KVM. Please read Knowledge Base Article KBA NK-1500-0518 for additional information.

The use of patch panels as part of the wiring between the PC and Wyse 5030 (P25) / Amulet Hotkey (DXZ4) KVM is strongly discouraged due to possible network issues introduced using these devices. Dedicated wiring runs are strongly recommended for Wyse 5030 (P25)/Amulet Hotkey (DXZ4) KVM connections.

If a switched network solution will be used between multiple workstations and remote Wyse 5030 (P25) / Amulet Hotkey (DXZ4) device it must be a network dedicated to serving the Wyse 5030 (P25) / Amulet Hotkey (DXZ4) KVM devices and must not be shared with any other communications, Ethernet network planning and design will be required for a successful implementation. Consult Emerson SureService Advanced Services to obtain a quotation for assistance with this network planning.

DeltaV Tower Server [based on the Dell T640XL server]			
Model #	O/S	DeltaV Compatibility	Warranty
SE2711Cxx	Windows Server® 2016 Std. 64-bit Emb. installed	DeltaV v13.3.1 and newer	5 Year

- 4 1GB Ethernet ports
- Integrated VGA Controller
- 8 USB ports: USB 3.0 1 front / 4 rear, USB 2.0 1 front / 2 rear
- Memory: 16GB
- Hard drive: hot pluggable 15K RPM SAS 12Gbps 2.5 hard drives w/ 3.5" Hybrid Carrier: PERC H730 RAID Controller 2GB
- DVD+/- R/W SATA drive
- USB Optical mouse (2 button w/scroll), Local USB country keyboard, Local power cord option
- Height 443.48 mm (17.45 inch) with feet / 430.48 mm (16.9 inch) without feet
- Width 302.5 mm (11.9 inch) with feet opened / 217.92 mm (8.57 inch) with feet closed
- Depth 692.8 mm (27.27 inch) without bezel / 708.7 mm (27.9 inch) with bezel
- Weight (maximum configuration) 49.65 kg / 109.45 lbs. for 3.5 inch hard-drive chassis
- Dual, hot-pluggable 750W power supply



NOTE: UPS required if used as a ProfessionalPlus to protect the system in the event of an unplanned power loss

- Vibration: Operating: 0.26G at 5Hz to 350Hz, Storage: 1.88G at 10Hz to 500Hz for 15 minutes
- Shock: Operating Shock: 6 shock pulses of 40G for up to 2.3ms, Storage: 6 shock pulses of 71G for up to 2ms
- Temperature: Operating 10°C to 35°C (50°F to 95°F) Storage -40°C to 65°C (-40°F to 149°F)
- Relative Humidity: Operating 5% to 85% (non-condensing) Maximum dew point temperature = 29°C Storage 5% to 90% (non-condensing) Maximum dew point temperature = 29°C

NOTE: Servers do not have PS/2 ports or parallel ports. Requires the use of a USB dongle

- The RD1000 is not included in the standard server and must be ordered separately from Dell. Only an external RD1000 can be supplied separately.
- Includes Windows Server® 2016 Standard license and a Server 2016 Std. 64-bit recovery image DVD. Windows Server 2016 Std. 64-bit operating system comes pre-installed and includes Server 2016 64-bit recovery image DVD. Includes 5 additional server Device CAL licenses (total of 10). Language support included in the DeltaV media pack.
- This server supports 1680x1050 monitor resolutions, but does not support 1920x1080 monitor resolution, multi-monitors or sound cards (no speakers provided with servers).

NOTE: This server does not support the Windows Server 2008 (32-Bit) or Windows Server 2008 R2 (64-Bit) Operating Systems

NOTE: This server does not support the Windows Server 2003 Operating System

Servers for use with Windows Server 2003 (32-bit) and 2008 R2 (64-bit) must be purchased using the refurbished computer hardware available from the DeltaV system. Please consult with Installed Base support for information on the refurbished computer program.

SE2711C03 - Tower Chassis Single Xeon Six-Core CPU Server
<ul style="list-style-type: none"> ■ Drives: Two 800GB hot pluggable Solid State Drives 12Gbps 2.5" hard drives in RAID 1 Array ■ Single CPU - Xeon Silver 4112 2.6GHz, 4C/8T, 8.25M Cache, 9.6GT/s 2UPI, Turbo, HT, (85W) DDR4-2400
SE2711C04 - Tower Chassis Dual Xeon Six-Core CPU Server
<ul style="list-style-type: none"> ■ Drives: Six 800GB hot pluggable Solid State Drives 12Gbps 2.5" hard drives in RAID 10 Array ■ Two CPUs - Xeon Silver 4112 2.6GHz, 4C/8T, 8.25M Cache, 9.6GT/s 2UPI, Turbo, HT, (85W) DDR4-2400

DeltaV Rack-Mount Server [based on the Dell PowerEdge R740XL Server]			
Model #	O/S	DeltaV Compatibility	Warranty
SE2712Cxx	Windows Server® 2016 Std. 64-bit	DeltaV v13.3.1 and newer	5 Year
<ul style="list-style-type: none"> ■ 2U Rack-mountable chassis with sliding ready rails and cable management arm ■ 4 1GB Ethernet ports ■ 4 USB ports – 2xUSB 3.0 back panel and 2xUSB 2.0 front panel ■ Integrated VGA Controller ■ Hot-pluggable drive backplane ■ Redundant, hot-pluggable, 750W power supplies. <p>NOTE: UPS required if used as a ProfessionalPlus</p> <ul style="list-style-type: none"> ■ DVD+/- R/W SATA drive ■ USB mouse (2 button w/ scroll) ■ Local USB country keyboard ■ 2 Local power cables ■ Rack server dimensions H: 8.68 cm (3.42 in.) x w: 48.20 cm (18.98 in.) x d: 71.55 cm (28.17 in.) ■ Rack server weight 26.3 kg / 57.98 lb, maximum configuration <p>NOTE: Servers do not have PS/2 ports or parallel ports. Will require the use of a USB DeltaV dongle Environmental</p> <ul style="list-style-type: none"> ■ Maximum Vibration: Operating 0.26 Grms at 5 Hz to 350 Hz (all operation orientations). Storage 1.88 Grms at 10Hz to 500Hz for 15 minutes. ■ Maximum Shock: Operating: Six consecutively executed shock pulses in the positive and negative x, y, and z axes of 6 G for up to 11 ms. Storage: Six consecutively executed shock pulses in the positive and negative x, y, and z axes (one pulse on each side of the system) of 71 G for up to 2 ms. ■ Temperature: Operating 10°C to 35°C (50°F to 95°F) Storage -40°C to 65°C (-40°F to 149°F) ■ Relative Humidity: Operating 10% to 80% (non-condensing) Maximum dew point temperature = 29°C Storage 5% to 95% (non-condensing) Maximum dew point temperature = 33°C ■ Includes Windows Server® 2016 Standard license and a Server 2016 Std. 64-bit recovery image DVD. Windows Server 2016 Std. 64-bit operating system comes pre-installed and includes Server 2016 64-bit recovery image DVD. Includes 5 additional server Device CAL licenses (total of 10). Language support included in the DeltaV media pack. ■ This server supports 1680x1050 monitor resolutions, but does not support 1920x1080 monitor resolution, multi-monitors or sound cards (no speakers provided with servers). <p>NOTE: This server does not support the Windows Server 2008 (32-Bit) or Windows Server 2008 R2 (64-Bit) Operating Systems</p> <p>NOTE: This server does not support the Windows Server 2003 Operating System</p> <p>Servers for use with Windows Server 2003 (32-bit) and 2008 R2 (64-bit) must be purchased using the refurbished computer hardware available from the DeltaV system. Please consult with Installed Base support for information on the refurbished computer program.</p>			



SE2712C06 - DeltaV Server based on the Dell PowerEdge R740XL Rack Mounted Server – RAID 1

- Two Xeon Silver 4112 2.6GHz, 4C/8T, 8.25M Cache, 9.6GT/s 2UPI, Turbo, HT, (85W) DDR4-2400
- Four x8 PCIe Gen3 slots
- Perc H730 2GB NV Cache, RAID controller mini card
- Memory: 16GB
- Two 800GB hot pluggable Solid State Drives 12Gbps 2.5” hard drives in a RAID1 Array

SE2712C02 - DeltaV Server based on the Dell PowerEdge R740XL Rack Mounted Server – RAID 10

- Two Xeon Silver 4112 2.6GHz, 4C/8T, 8.25M Cache, 9.6GT/s 2UPI, Turbo, HT, (85W) DDR4-2400
- Six x8 PCIe Gen3 slots, Two x16 PCIe slots
- Perc H730 RAID controller, 2GB NV Cache, adapter, full height
- Memory: 16GB
- Six 600GB hot pluggable 15K RPM SAS 12Gbps 2.5” hard drives in a RAID10 Array

SE2712C07 - DeltaV Server based on the Dell PowerEdge R740XL Rack Mounted Server – RAID 10

- Two Xeon Silver 4112 2.6GHz, 4C/8T, 8.25M Cache, 9.6GT/s 2UPI, Turbo, HT, (85W) DDR4-2400
- Six x8 PCIe Gen3 slots, Two x16 PCIe slots
- Perc H730 RAID controller, 2GB NV Cache, adapter, full height
- Memory: 16GB
- Six 800GB hot pluggable Solid State Drives 12Gbps 2.5” hard drives in a RAID10 Array

SE2712C04 - DeltaV High Performance Server based on the Dell PowerEdge R740XL Rack Mounted Server - RAID 10

- Two Xeon Gold 6128 3.4GHz, 6C/12T, 19.25M Cache, 10.4GT/s 2UPI, Turbo, HT, (115W) DDR4-2666
- Six x8 PCIe Gen3 slots, Two x16 PCIe slots
- Perc H740 RAID controller, LP adapter
- Memory: 64GB
- Six 480GB hot pluggable Solid State Drives 12Gbps 2.5” hard drives in a RAID10 Array

Independent DeltaV Domain Controller Tower Server [based on the Dell PowerEdge T340 Server]			
Model #	O/S	DeltaV Compatibility	Warranty
SE2721C01	Windows Server 2019 Std. 64-bit*	DeltaV v14.3 and newer	5 year

- Four Gbps Ethernet ports (two on-board + Broadcom 5720 dual port network interface)
- 7 USB ports: 1 front (11x USB 3.0) / 6 rear (4x USB 2.0 + 2x USB 3.0)
- Single CPU Quad-Core Intel® Xeon® E-2124 3.3 GHz, 8M cache, 4C/4T
- Integrated VGA controller
- Memory: 16GB
- Hard drive: hot pluggable 10K RPM SAS 12Gbps 2.5” hard drives with 3.5” hybrid carrier
- PERC H330 Integrated RAID controller: drives included: Two 600GB set up in a RAID 1 configuration
- DVD+/-RW drive
- USB optical mouse (2 button with scroll), local USB country keyboard, local power cords option
- Height: 430.3mm (16.94”) without feet / 430.3mm (17.45”) with feet
- Width: 218mm (8.58”) with feet closed / 307.9mm (8.58”) with feet opened
- Depth: 589.1mm (23.19”) without bezel / 603.2mm (23.75”) with bezel
- Weight: 25.25kg (55.67lb)
- Dual, hot pluggable redundant 495W power supplies
- Vibration: Operating: 0.26G at 5Hz to 350Hz, Storage: 1.88G at 10Hz to 500Hz for 15 minutes
- Shock: Operating: six shock pulses of 40G for up to 2.3ms, Storage: 6 shock pulses of 71G for up to 2ms
- Temperature: Operating 10°C to 35°C (50°F to 95°F) Storage -40°C to 65°C (-40°F to 149°F)
- Relative Humidity: Operating 10% to 80% (non-condensing) Maximum dew point temperature = 29°C Storage 5% to 95% (non-condensing) Maximum dew point temperature = 33°C


Note: Servers do not have PS/2 ports or parallel ports. Requires the use of a USB dongle

- The RD1000 is not included in the standard server and must be ordered separately from Dell. Only an external RD1000 can be supplied separately.
- This server supports 1280x1024 monitor resolutions, but does not support 1680x1050, 1920x1080 monitor resolutions, multi-monitors or sound cards (no speakers provided with servers).

***SE2721C01 is delivered with Windows Server 2019 which must be downgraded (at no additional cost) to Windows Server 2016 Standard Edition for use with DeltaV v14.3 and newer. Downgrade Media to Windows Server 2016 DVD is included.** 5 User CAL licenses included. No language support included.

Note: The SE2721C01 is based on off-the-shelf Dell PowerEdge T340 Server with 5-year warranty. Spares are provided by Dell based on Dell factory lead times.

Note: This server does not support Server 2003, Server 2008 (32-bit), or Server 2008 R2 (64-bit).



Independent DeltaV Domain Controller Rack-Mount Server [based on the Dell PowerEdge R340 Server]			
Model #	O/S	DeltaV Compatibility	Warranty
SE2722C01	Windows Server 2019 Std. 64-bit*	DeltaV v14.3 and newer	5 year
<ul style="list-style-type: none"> ■ Four Gbps Ethernet ports (two on-board + Broadcom 5720 dual port network interface) ■ 3 USB ports: 1 front (1x USB2.0) / 2 rear (2x USB3.0) ■ Single CPU Quad-Core Intel® Xeon® E-2124 3.3 GHz, 8M cache, 4C/4T ■ Integrated VGA controller ■ Memory: 16GB ■ Hard drive: hot pluggable 10K RPM SAS 12Gbps 2.5" hard drives with 3.5" hybrid carrier ■ PERC H330 Integrated RAID controller: drives included: Two 600GB set up in a RAID 1 configuration ■ DVD+/-RW drive ■ USB optical mouse (2 button with scroll), local USB country keyboard, local power cords option ■ Rack server dimensions: Height 42.8mm (1.68") x Width 434mm (17.08") x Depth 609.24mm (23.98") with bezel ■ Rack server weight: 13.2kg (29.10lb) ■ Dual, hot pluggable redundant 350W power supplies. ■ Vibration: Operating: 0.26G at 5Hz to 350Hz, Storage: 1.88G at 10Hz to 500Hz for 15 minutes ■ Shock: Operating: six shock pulses of 6G for up to 11ms, Storage: six shock pulses of 71G for up to 2ms ■ Temperature: Operating 10°C to 35°C (50°F to 95°F) Storage -40°C to 65°C (-40°F to 149°F) ■ Relative Humidity: Operating 10% to 80% (non-condensing) Maximum dew point temperature = 29°C Storage 5% to 95% (non-condensing) Maximum dew point temperature = 33°C <p>Note: Servers do not have PS/2 ports or parallel ports. Requires the use of a USB dongle</p> <ul style="list-style-type: none"> ■ The RD1000 is not included in the standard server and must be ordered separately from Dell. Only an external RD1000 can be supplied separately. ■ This server supports 1280x1024 monitor resolutions, but does not support 1680x1050, 1920x1080 monitor resolutions, multi-monitors or sound cards (no speakers provided with servers). <p>*SE2722C01 is delivered with Windows Server 2019 which must be downgraded (at no additional cost) to Windows Server 2016 Standard Edition for use with DeltaV v14.3 and newer. Downgrade Media to Windows Server 2016 DVD is included. 5 User CAL licenses included. No language support included.</p> <p>Note: The SE2722C01 is based on off-the-shelf Dell PowerEdge R340 Server with 5-year warranty. Spares are provided by Dell based on Dell factory lead times.</p> <p>Note: This server does not support Server 2003, Server 2008 (32-bit), or Server 2008 R2 (64-bit).</p>			



Information on the “Windows for Embedded Systems” Operating Systems

“Windows for Embedded Systems” is a version of the Windows Operating systems specifically created and licensed for vendors who are purchasing the operating system for resale as part of a solution such as DeltaV DCS.

The DeltaV SE numbered computers using the “Windows for Embedded Systems” license must only be used as a DeltaV workstation or server for DeltaV application related tasks. These computers may not be purchased for use as a general purpose computer or used for applications where DeltaV or DeltaV related tasks are not primary use for the computer.

Use of KVM (Keyboard, Video, and Mouse) extenders and switches on DeltaV Workstations

Only the specific KVM products listed in the DeltaV Alliance program are supported with DeltaV. Please note the video card information on the workstation computers. The video output connectors have changed and special adaptors must be used [that may not be supplied] or new KVM equipment may have to be obtained to use these computers in existing systems where KVMs are installed. These computers no longer have VGA connectors and the use of VGA adaptors may not be supported by existing KVM devices.

Computer Ordering Information

Ordering numbers are listed in the sections above. These specifications are subject to change without notice. Computers sold for use with the DeltaV system meet hardware specifications needed to support DeltaV solutions. We do not guarantee that the hardware specifications of the computers will remain unchanged during the sales life of a specific DeltaV SE ordering number.

The DeltaV Workstation and Server specifications provided in this data sheet describe the products sold by Emerson for use with DeltaV Control Systems. These specifications are not provided to allow users to purchase similar computers directly from Dell or other PC vendors. The DeltaV system is supported only on the specific Dell computer configurations specified in this document and sold from our pricebook. The DeltaV system is not supported on other Dell computers or other computer configurations or on non-Dell computers unless specifically noted otherwise. Any use of non-supported computers will affect our ability to provide technical support and will involve additional costs for technical support.

This PDS only provides specifications for DeltaV specific options that can vary from the standard Dell computer. So specifications for features that are built-in and not optional are not listed. If detailed information on the standard features of the computer is required, please refer to the Dell specifications.

NOTE: *Hardware specifications of these computers especially as related to: size, backplane connection types (such as COM ports or P/S2 ports), number of slots, etc. are not guaranteed to be available on newer DeltaV workstations as these specifications can change from the vendor. It may not be possible to provide the same capabilities from one version of a DeltaV Workstation to a succeeding version.*

To order the computers in this document with specifications different than those listed requires a customer special configuration to be quoted by Emerson. Changing computer specification requires testing the new configuration for compatibility with DeltaV software.

Note about modifying DeltaV Workstation and Server Hardware Configurations

DeltaV workstations and servers sold by Emerson meet the hardware specifications for standard DeltaV applications. No additional hardware changes are required to support DeltaV applications and standard installations. As such we do not support the field installation of additional memory, additional hard drives, added NIC cards, different video cards or other field implemented hardware modifications without consultation with Emerson. Failure to consult with Emerson on any hardware modifications may result in poor DeltaV performance and make it difficult to provide technical support for those workstations that have been modified. Hardware modifications can also require changes to the Windows O/S configuration that may impact the performance of the workstation or the network.

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