DeltaV™ Workstation and Server Hardware

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 have been chosen to provide the best cost performance solution for your DeltaV system.

Emerson has 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.

- Pre-installed Operating System (O/S) software for ease of deployment
- 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
**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. Workstations are available to be shipped with Windows 10 IoT Enterprise LTSB 2016 or Windows 10 IoT Enterprise LTSC 2021. Servers are available to be shipped with Windows Server 2016 or Windows Server IoT 2022.

**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. Emerson might update hardware so that the benefits of increasing performance inherent with using state-of-the-art equipment can be realized. 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.LTS, 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.

<table>
<thead>
<tr>
<th>Order Number</th>
<th>DeltaV Compatibility</th>
<th>Description</th>
<th>Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE2807</td>
<td>&gt;=13.3.2</td>
<td>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</td>
<td>3 year</td>
</tr>
<tr>
<td>SE2814</td>
<td>&gt;=13.3.2</td>
<td>24-inch LED Widescreen Monitor - Dell Monitor P2422H; 16:9 Aspect Ratio; 1920x1080@60Hz Resolution; DP/HDMI/VGA/USB Cables included: 1 DP, 1 VGA (Japan only), 1 HDMI (Brazil only), 1 USB <strong>NOTE:</strong> DeltaV T640/R740 based servers do not support 1080p</td>
<td>3 year</td>
</tr>
<tr>
<td>SE2815</td>
<td>&gt;=13.3.2</td>
<td>22-inch LED Widescreen Monitor - Dell Monitor P2222H; 16:9 Aspect Ratio; 1920x1080@60Hz Resolution; DP/HDMI/VGA/USB Cables included: 1 DP, 1 VGA (Japan only), 1 HDMI (Brazil only), 1 USB</td>
<td>3 year</td>
</tr>
<tr>
<td>SE2816</td>
<td>&gt;=13.3.2</td>
<td>24-inch LED Widescreen Monitor - Dell Monitor P2423; 16:10 Aspect Ratio; 1920x1200@60Hz Resolution; VGA/DVI/DP/HDMI Cables included: 1 DP, 1 VGA (Japan only), and 1 USB</td>
<td>3 year</td>
</tr>
<tr>
<td>SE2818</td>
<td>&gt;=13.3.2</td>
<td>43-inch LED Ultra HD 4K Quad Monitor - Dell Monitor U4323QE; Connect up to four independent clients to a single monitor; 16:9 Aspect Ratio; 3840 x 2160 at 60 Hz (HDMI &amp; DP only) Resolution; 2xHDMI / 2xDP</td>
<td>3 year</td>
</tr>
</tbody>
</table>

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
(apply 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 of 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 Workstation [based on Dell OptiPlex XE4 workstation]

<table>
<thead>
<tr>
<th>Model #</th>
<th>O/S</th>
<th>DeltaV Compatibility</th>
<th>Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE2608C01</td>
<td>Windows 10 IoT Enterprise LTSC 2021</td>
<td>DeltaV v14.LTS* and v15.LTS</td>
<td>5 Year</td>
</tr>
</tbody>
</table>

- 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 12700, 12 Core Processor, 2.1 to 4.9 GHz
- Memory: 16GB
- Drive: 512GB Solid State Drive (SSD)
- No DVD drive included
- On-board integrated audio
- On-board integrated graphics – Single/Dual/Quad Monitors
- USB optical mouse (2 button w/scroll)
- External speaker
- USB local country keyboard
- Local power cord option
- Dimensions (H x W x D) Inches/(mm): 11.4”x 3.65”x 11.53” (290 x 92.6 x 292.8)
- Power Supply Unit (PSU): 300W up to 92% efficient PSU (80Plus Platinum)
- Temperature: Operating 5°C to 45°C (41°F to 113°F), Storage -40°C to 65°C (-40°F to 149°F)
- Relative Humidity: Operating 20% to 80% (non-condensing), Storage 5% to 95% (non-condensing)
- Please see Dell OptiPlex XE4 documentation for detailed environmental specifications.
- The SE2608C01 ships with Windows 10 IoT LTSC 2021 installed. Recovery image is downloadable on [https://guardian.emerson.com](https://guardian.emerson.com).

*Refer to KBA NK-1900-0775 for more information on v14.LTS operating systems.*
## DeltaV Dual/Quad Monitor Workstation [based on Dell Precision T5820XL workstation]

<table>
<thead>
<tr>
<th>Model #</th>
<th>O/S</th>
<th>DeltaV Compatibility</th>
<th>Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE2612CXX</td>
<td>Windows 10 IoT Enterprise LTSC 2021</td>
<td>DeltaV v14.LTS* and v15.LTS</td>
<td>5 Year</td>
</tr>
</tbody>
</table>

- 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

**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 with C03 and C04
- 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)

*Refer to KBA NK-1900-0775 for more information on v14.LTS operating systems.
<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE2612C05</td>
<td>Dual/Quad Monitor Workstation Windows 10 IoT LTSC 2021</td>
<td>Drives: One 500GB 7200rpm SATA, 2.5”, No RAID</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE2612C07</td>
<td>Dual/Quad Monitor Workstation Windows 10 IoT LTSC 2021</td>
<td>Drives: 2x 500GB 7200rpm SATA, 2.5”, RAID 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MegaRAID SAS 9460-16i 12Gb/s PCIe SATA/SAS HW RAID controller</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE2612KIT-1</td>
<td>Dual/Quad Monitor Workstation</td>
<td>Rack &amp; sliding rails kit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TS820 w/kit: Height 6.95&quot; (176.5 mm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE2612KIT-2</td>
<td>Dual/Quad Monitor Workstation</td>
<td>TERA2 Card</td>
</tr>
</tbody>
</table>
### DeltaV Rack Mount Single/Dual/Quad Monitor Workstation [based on Dell Precision R7920XL workstation]

<table>
<thead>
<tr>
<th>Model #</th>
<th>O/S</th>
<th>DeltaV Compatibility</th>
<th>Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE2613C06</td>
<td>Windows 10 IoT Enterprise LTSC 2021</td>
<td>DeltaV v14.LTS* and v15.LTS</td>
<td>5 Year</td>
</tr>
</tbody>
</table>

- 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
- 8x DVD +/- RW Slimline Drive
- Audio: Creative Sound Blaster Audigy
- Video: Radeon Pro WX5100, includes (4) 3ft DP to DP cables, and (1) 6t DP to DP cable.

**NOTE:** Supports (4) 4K monitors

- TERA2 Card

**NOTE:** The TERA2 card supports but does not include SE2500KIT-5, the Amulet Hotkey (DXZ4) PCoIP Zero Client KVM Extender for quad monitors. See the Amulet Hotkey (DXZ4) specs below.

- 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 SE2613C06 ships with Windows 10 IoT LTSC 2021 installed.

*Refer to KBA NK-1900-0775 for more information on v14.LTS operating systems.*
DeltaV Workstation and Server Hardware

DeltaV Operator Panel (Industrial Phoenix Panel Mounted PC)

<table>
<thead>
<tr>
<th>Model #</th>
<th>Description</th>
<th>DeltaV Compatibility</th>
<th>Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE2616C01</td>
<td>15.6&quot; Touchscreen Monitor, 1366x768 Resolution; 8GB RAM; 240GB SSD Drive</td>
<td>DeltaV v14.LTS and newer</td>
<td>2 Year</td>
</tr>
<tr>
<td>SE2616C02</td>
<td>15.6&quot; Touchscreen Monitor, 1366x768 Resolution; 16GB RAM; 480GB SSD Drive; Recommended with DeltaV Live</td>
<td>DeltaV v14.LTS and newer</td>
<td>2 Year</td>
</tr>
<tr>
<td>SE2617C01</td>
<td>18.5&quot; Touchscreen Monitor, 1366x768 Resolution; 8GB RAM; 240GB SSD Drive</td>
<td>DeltaV v14.LTS and newer</td>
<td>2 Year</td>
</tr>
<tr>
<td>SE2617C02</td>
<td>18.5&quot; Touchscreen Monitor, 1366x768 Resolution; 16GB RAM; 480GB SSD Drive; Recommended with DeltaV Live</td>
<td>DeltaV v14.LTS and newer</td>
<td>2 Year</td>
</tr>
<tr>
<td>SE2618C01</td>
<td>21.5&quot; Touchscreen Monitor, 1920x1080 FHD Resolution; 8GB RAM; 240GB SSD Drive</td>
<td>DeltaV v14.LTS and newer</td>
<td>2 Year</td>
</tr>
<tr>
<td>SE2618C02</td>
<td>21.5&quot; Touchscreen Monitor, 1920x1080 FHD Resolution; 16GB RAM; 480GB SSD Drive; Recommended with DeltaV Live</td>
<td>DeltaV v14.LTS and newer</td>
<td>2 Year</td>
</tr>
<tr>
<td>SE2619W3YREXT</td>
<td>3 Year Warranty Extension from 2 to 5 Years. Must be purchased on same order with the DeltaV Operator Panel.</td>
<td>DeltaV v14.LTS and newer</td>
<td>3 Year Warranty Extension</td>
</tr>
</tbody>
</table>

- 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 IoT Enterprise LTSB 2016 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, 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)

<table>
<thead>
<tr>
<th>Current and Power Data</th>
<th>With 15.6-in. display</th>
<th>With 18.5-in. display</th>
<th>With 21.5-in. display</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current consumption @24 V, maximum</td>
<td>1.89 A</td>
<td>1.89 A</td>
<td>1.89 A</td>
</tr>
<tr>
<td>Power, maximum, @24</td>
<td>45.4 W</td>
<td>45.4 W</td>
<td>45.4 W</td>
</tr>
</tbody>
</table>

- Windows 10 IoT Enterprise LTSB 2016 64-bit installed
DeltaV Rugged Laptop – PK Controller Engineering Laptop [based on Dell Latitude 14” Rugged 5430]

<table>
<thead>
<tr>
<th>Model #</th>
<th>O/S</th>
<th>DeltaV Compatibility</th>
<th>Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE2625C01</td>
<td>Windows 10 IoT LTSC 2021</td>
<td>DeltaV v14.LTS* and v15.LTS</td>
<td>5 Year</td>
</tr>
</tbody>
</table>

- 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 i7-1185G7 Processor, 3GHz
- Memory: 16.0GB
- Drives: 512GB Solid State Drive (SSD)
- No DVD drive included
- On-board integrated audio
- 1920x1080, Outdoor Readable, Touch screen
- Integrated touchpad
- Sealed Internal RGB Backlit English Keyboard
- 2 3-cell (53.5 Whr) Lithium Ion Battery
- 90W AC Adapter
- Dimensions (H x W x D) Inches (mm): 0.76 x 12.65 x 8.35 (19.3 x 321.4 x 212)
- Weight: 3.01 lbs / 1.36 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.

This laptop is only tested for use with the Standalone PK Engineering software, which is its intended use.


*Refer to KBA NK-1900-0775 for more information on v14.LTS operating systems.
## SE2500KIT-6 – Amulet Hotkey (DXZC) PCoIP Zero Client

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I/O Peripheral Support</td>
<td>Dual DisplayPort ports, Four External USB 2.0 ports (2 front, 2 back)</td>
</tr>
<tr>
<td>Button / LEDs</td>
<td>Multi-Function power button LED</td>
</tr>
<tr>
<td>Networking</td>
<td>Single RJ45 10/100/1000 Base-T Gigabit Ethernet</td>
</tr>
<tr>
<td>Display</td>
<td>Dual monitors up to 1920 x 1200 maximum @ 60Hz</td>
</tr>
<tr>
<td>Audio</td>
<td>Stereo headphone 3.5mm jack, Stereo microphone input 3.5mm jack, Stereo line out 3.5mm jack</td>
</tr>
<tr>
<td>Physical Characteristics</td>
<td>Height x Width x Depth: 34 mm x 176 mm x 133 mm (1.3 in x 6.9 in x 5.2 in) Weight 0.6kg / 1.4 lbs.</td>
</tr>
<tr>
<td>Device Security</td>
<td>Built-in Kensington security slot (cable sold separately)</td>
</tr>
<tr>
<td>Power</td>
<td>Less than 12W nominal (excluding USB devices)</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>Operating: 59° to 104°F (15° to 40°C) Storage: 14° to 140°F (-10° to 60°C)</td>
</tr>
<tr>
<td>Warranty</td>
<td>3 year</td>
</tr>
</tbody>
</table>
### SE2500KIT-5 – Amulet Hotkey (DXZ4) PCoIP Zero Client

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

### Amulet Hotkey (DXZ4) KVM Installation Note:

Dell recommends using a Gigabit Ethernet switch between PC with the Terra-2 card and the Amulet Hotkey (DXZC & 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 Amulet Hotkey (DXZC & DXZ4) KVM is strongly discouraged due to possible network issues introduced using these devices. Dedicated wiring runs are strongly recommended for Amulet Hotkey (DXZC & DXZ4) KVM connections.

If a switched network solution will be used between multiple workstations and remote Amulet Hotkey (DXZC & DXZ4) device it must be a network dedicated to serving the Amulet Hotkey (DXZC & 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 Workstation and Server Hardware

**DeltaV Rack-Mount Server [based on the Dell PowerEdge R740XL Server]**

<table>
<thead>
<tr>
<th>Model #</th>
<th>O/S</th>
<th>DeltaV Compatibility</th>
<th>Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE2712Cxx</td>
<td>Windows Server® 2016 Std. 64-bit or Server IoT 2022 Std. installed</td>
<td>DeltaV v13.3.1 and newer</td>
<td>5 Year</td>
</tr>
</tbody>
</table>

- 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.

**NOTE:** UPS required if used as a ProfessionalPlus

- 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

**NOTE:** Servers do not have PS/2 ports or parallel ports. Will require the use of a USB DeltaV dongle Environmental

- 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
- This server supports 1680x1050 monitor resolutions, but does not support 1920x1080 monitor resolution, multi-monitors or sound cards (no speakers provided with servers).

The SE2712C08/C09/C10/C11 ships with Windows Server 2016 installed. Recovery image is downloadable on [https://guardian.emerson.com](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.

The SE2712C12/C13/C14/C15 ships with Windows Server IoT 2022 installed.

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 your local Emerson support office for information on the refurbished computer program.

www.emerson.com/deltav
SE2712C08 – DeltaV Server based on the Dell PowerEdge R740XL Rack Mounted Server – RAID 1
Windows Server 2016

- 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 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
- Recovery image is downloadable on https://guardian.emerson.com
- Includes Windows Server 2016 pre-installed

Windows Server 2016

- 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 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
- Recovery image is downloadable on https://guardian.emerson.com
- Includes Windows Server 2016 pre-installed

Windows Server 2016

- 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 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
- Recovery image is downloadable on https://guardian.emerson.com
- Includes Windows Server 2016 pre-installed

Windows Server 2016

- 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 RAID controller, LP adapter
- Memory: 64GB
- Six 800GB hot pluggable Solid State Drives 12Gbps 2.5” hard drives in a RAID10 Array
- Recovery image is downloadable on https://guardian.emerson.com
- Includes Windows Server 2016 pre-installed
<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
</table>
| SE2712C12    | 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 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  
Windows Server 2022 pre-installed |
| SE2712C13    | 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 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  
Windows Server 2022 pre-installed |
| SE2712C14    | 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 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  
Windows Server 2022 pre-installed |
| SE2712C15    | 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 RAID controller, LP adapter  
Memory: 64GB  
Six 800GB hot pluggable Solid State Drives 12Gbps 2.5" hard drives in a RAID10 Array  
Windows Server 2022 pre-installed |
DeltaV Tower Server [based on Dell PowerEdge T350 server]

<table>
<thead>
<tr>
<th>Model #</th>
<th>O/S</th>
<th>DeltaV Compatibility</th>
<th>Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>NEW</em> SE2718Cxx</td>
<td>Windows Server® IoT 2022 installed</td>
<td>v14.LTS MultiOS, v15.LTS and later</td>
<td>5 Year</td>
</tr>
</tbody>
</table>

- Hard Drive: Hot-pluggable, (Qty 2 for SE2718C01, Qty 6 for SE2718C02) 800GB SSD SAS 24Gbps 2.5" hard drives with 3.5" hybrid carrier; PERC RAID controller
- CPU: Intel XEON E-2388G 3.2GHz 8c/16T with turbo
- Memory: 16GB
- Ethernet ports: 6, 1GB ports
- USB ports: (7 total) 1 USB 3.0 – front / 5 USB 2.0 rear
- Power Supply: Dual, hot-pluggable, redundant, 600W

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

- BD-15 VGA port on back
- Mouse: Dell optical (2 button and scroll)
- USB Keyboard
- Local power cord
- Supports 1920 x 1080 monitor resolution
- No DVD Drive

**Dimensions**
- Height 369.5 mm (14.54 in) without feet / 382.5 mm (15.05 in) with feet
- Width 175 mm (6.88 in)
- Depth 562.12 mm (22.13 in) without bezel / 581.12 mm (22.87 in) with bezel
- Weight 25.34 kg (55.86 pounds)

**Environmental** (for additional information about environmental specifications, refer to the Product Environmental Datasheet located on Documentation on [www.dell.com/support/home](http://www.dell.com/support/home))
- Vibration: 0.21 Grms at 5 Hz to 500 Hz for 10 min during operation / 1.88 Grms at 10 Hz to 500 Hz for 15 minutes in storage
- Shock: 6 shock pulses of 71 G for up to 11 ms during operation / 6 shock pulses of 6 G for up to 2 ms in storage
- Temperature: 10-35°C (50-95°F) ASHRAE A2 continuous operation / -40 to 65°C (-104 to 149°F) in storage
- Relative humidity: 8% with minimum dew point -12°C to 80% with 21°C (69.8°F) maximum dew point, ASHRAE A2 continuous operation / 5-95% with 27°C (80.6°F) maximum dew point in storage

This server does not come with the Dell OpenManage Server Administrator DVD. The software agent can be downloaded from the Dell website if needed.

The SE2718Cxx ships with Windows Server IoT 2022 installed with 10 CALs. Recovery image is downloadable on [https://guardian.emerson.com](https://guardian.emerson.com).
## Independent DeltaV Domain Controller Rack-Mount Server [based on the Dell PowerEdge R350 Server]

<table>
<thead>
<tr>
<th>Model #</th>
<th>O/S</th>
<th>DeltaV Compatibility</th>
<th>Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE2723C01</td>
<td>Windows Server IoT 2022</td>
<td>DeltaV v14.LTS* and v15.LTS</td>
<td>5 year</td>
</tr>
</tbody>
</table>

- 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)
- Intel® Xeon® E-2324 3.1 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 H755 controller card: 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 (1.7") x Width 434mm (17.09") x Depth 570.23mm (22.44") with bezel
- Rack Server Weight: 13.6kg (29.98lb)
- 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 8% to 80% (non-condensing) Maximum dew point temperature = 21°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

- This server supports 1280x1024 monitor resolutions, but does not support 1680x1050, 1920x1080 monitor resolutions, multi-monitors or sound cards. No speakers are provided with servers.

*SE2723C01 is delivered with Windows Server IoT 2022. Recovery media should be requested from Dell.*

**NOTE:** The SE2723C01 is based on off-the-shelf Dell PowerEdge R350 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 or Server 2016.

*Refer to KBA NK-1900-0775 for more information on v14.LTS operating systems.
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.

Information on upgrading operating systems

Each computer model ordered through Emerson is shipped with a specific operating system. In some, but not all cases, these computers can be upgraded to the next operating system that is compatible with DeltaV. For example, many servers shipped with Server 2016 can be upgraded to Server IoT 2022. The operating system upgrade is via an upgrade kit offered by Emerson, which includes all the appropriate Microsoft licenses needed for the next version of operating system. Please contact your local Emerson service office to inquire if your existing computers are eligible and have upgrade kits available to run the latest operating system.

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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