

# DeltaV™ Workstation Hardware



*The DeltaV Operator Workstations are available in Windows 7/Server 2008 or Windows XP Operating Systems to support multiple versions of DeltaV Systems.*

- Pre-installed Operating System software for ease of deployment
- Available with Microsoft XP, Windows 7, and Server 2008 O/S.
- 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 limited variety of Dell Intel-based computers. Available using workstation hardware with single, dual or quad monitors or using server hardware with a single monitor, the selection of DeltaV workstation hardware provides the performance you need

to engineer your control strategy and operate your process.

DeltaV workstations run on a specific set of preselected Dell computer hardware specifically chosen to provide the best cost performance solution for your DeltaV system. We provide you with a guaranteed solution to deliver the performance required.

We have pre-tested DeltaV with both the hardware configuration and the operating system configuration so you can be sure that DeltaV will always operate correctly. You will never be bothered with incompatible drivers, bad or overwritten DLLs, or substandard hardware. You will not waste time in no-value system setup engineering and troubleshooting. Instead, you can focus on your process control functions.



## Benefits

**Pre-installed software.** When ordered through a DeltaV system integrator who 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, nor software versions to worry you. A trouble-free system is guaranteed.

**Easy control network installation.** The workstation ships from the factory with the appropriate DeltaV control network cards preinstalled—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 (ACN), and you've just set up a new DeltaV network node.

**Choose between PCs and servers to optimize your cost/performance.** Some systems are served well with PC workstations. But when larger systems demand higher levels of performance, the servers provide exactly what you need.

**Flexible options.** Match our options with your requirements for towers, servers, dual monitors and RAID storage. We provide recommendations, but the choice is yours. Either way, the operating system is pre-loaded and ready to roll.

## Product Description

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

We want you to enjoy the benefits of the increasing performance and decreasing costs inherent with using state-of-the-art, off-the-shelf equipment as much as possible. DeltaV performs testing to help eliminate the risks associated with new platforms, and we continue to focus on measures that extend the life of installed hardware.

## Workstation Hardware

**Plenty of horsepower.** All workstations use state-of-the-art processors well suited to provide the performance required for DeltaV software.

**Lots of memory.** All computers come with sufficient memory to handle DeltaV applications.

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

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

**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 Process Management consistently receives top honors in service from our customers (ref.: *Control* magazine January 1998 to January 2009). This service is extended with a variety of optional support plans. When you subscribe to one of these plans, you are supplied with an external modem. This modem enables the factory to perform remote diagnostics on your workstation should the need arise.

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

**System Backups-** The internally installed backup unit (server tower only) make backups a breeze. It is standard with the server. All workstations now come with a DVD-RW drive.

**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

**Due to potential incompatibilities between the supported video cards and other monitors we are not able provide product support if monitors other than those specified below are used**

The DeltaV system supports the Dell Professional P2213 22-inch Widescreen Flat Panel Monitor with a 16:10 aspect ratio in a 1680x1050 resolution in DeltaV 10.3 or newer systems. [DeltaV does not support 16:9 aspect ratio monitors]

Wide screen monitors are supported on all DeltaV Workstations except some server class computers as noted below. Wide screen monitors must be connected to the computer prior to making wide screen resolution selections.

**The DeltaV system also supports the SE2803 19" LCD Monitor (Dell Model 1913S) (5:4 aspect ratio 1280x1024 resolution only) on workstations and servers. (This SE2803 monitor does not support 1600x1200 resolutions). 20" 4:3 ratio monitors are no longer available and DeltaV is now providing 19" 5:4 ratio monitors to replace the 20" monitors.**

We also support the following NEC monitors:

- VE2801 - NEC MultiSync LCD2090UXi-BK 20 in Black Flat Panel LCD Monitor
- VE2802 - NEC MultiSync LCD2090UXi-BK 20 in Black Flat Panel LCD Monitor with Capacitive Touch.  
(Please see the Touchscreen product data sheet for details on touch screen technology. Wide screen touch screen currently not available from Emerson.)

*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.*

### Specifications Common to all Computers

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

*Except as noted in the specific computer section all computers are compatible only with DeltaV v7.4.2, or newer systems.– Please refer to the Emerson Process Management 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 [www.SureService.com](http://www.SureService.com)).*

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 10° to 35°C (50° to 95°F) Storage –40° to 65°C (–40° to 149°F)

**Relative humidity:** 20% to 80% (non-condensing)

**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 operating system restore image DVD for fast recovery of the O/S when restoring a computer. Operating Systems install disks are not provided.

**Unless specifically listed in the individual computer specifications floppy Drives are no longer included with computers. Files can be transferred using portable USB media rather than floppy drives. If a floppy drive is required a USB floppy drive can be supplied locally.**

**SE2514 or VE2553 DeltaV Operator Workstation – single monitor [based on Dell 7010 desktop computer]**

- Desktop chassis
- 3 Network Interface Ports, 1 onboard plus two add-in NICs
- Single Intel processor CORE i7-3770 3.4 GHz
- Memory: 2.0GB
- Drives: 250GB or larger
- 16x DVD +/- RW SATA drive
- On-board integrated audio
- On-board integrated video, HD Graphic 4000 (single-monitor only)
- Speakers
- Integrated PS/2 ports for keyboard and mouse
- USB Optical mouse (2 button w/scroll)
- USB Local country keyboard
- Local power cord option



- The SE2514 ships with Windows 7 Windows for Embedded Systems installed and includes a Windows 7 image DVD. This computer will support both English and non-English versions of DeltaV and includes the language MUI DVD required for installing a localized non-English version of DeltaV. This unit does not come with a Windows 7 O/S reinstall DVD. The image DVD is the only method available to reinstall the O/S on this computer. Note that Windows for Embedded Systems licenses do not support downgrade rights and XP cannot legally be installed on this computer. If you need an XP based computer you MUST order the VE number version. This computer cannot be converted to XP as we do not provide an XP license kit for this purpose.
- The VE2553 ships with Windows XP Windows for Embedded Systems installed and includes a Windows XP image DVD. This computer will support both English and non-English versions of DeltaV and uses the language MUI DVD required for installing a localized non-English version of DeltaV. This unit does not come with a Windows XP O/S reinstall DVD. The image DVD is the only method available to reinstall the O/S on this computer. Note that Windows for Embedded Systems licenses do not support downgrade rights. This computer is licensed for XP only and is not Windows 7 downgraded to XP. Future upgrades of this computer to any new O/S version will require purchase of a new Microsoft Windows license. Windows 7 cannot be installed on this computer unless a Windows 7 upgrade kit is purchased to obtain the proper Microsoft O/S licensing.
- CHASSIS DIMENSIONS:
  - Height 36.0 cm (14.17 inches), Width 10.2 cm (4.02 inches), Depth 41.0 cm (16.14 inches)  
Weight 7.9 kg (17.42 lb.)
- **Maximum vibration:** Operating 0.25 G at 3 to 200 Hz at 0.5 octave/min, Storage 0.5 G at 3 to 200 Hz at 1 octave/min
- **Maximum shock:** Operating Bottom half-sine pulse with a change in velocity of 50.8 cm/sec (20 inches/sec), Storage 27-G faired square wave with a velocity change of 508 cm/sec (200 inches/sec)

**SE2512 or VE2552 —DeltaV Rack Mount Workstation – Single and Dual Monitor workstation [based on Dell R5500]**

***The quad monitor rack mounted workstation is only supported on DeltaV v11.3 and newer versions***

- 3 network interface ports
- CPU: Single Intel Xeon Quad Core processor
- Memory: 4GB,
- Drives: Qty 2- 250GB in a RAID 1 configuration
- 8x DVD +/- RW Drive
- On-board integrated audio
- Video: Qty 1 - ATI FirePro V2270 dual DVI graphics card (dual-monitor capable). The video card provides one DVI output using an included splitter cable to provide dual DVI outputs. There are no VGA ports available on the video card. There are no DVI to VGA adaptors included.
- Speakers: Dell two-piece stereo speakers
- USB Optical mouse (2 button w/scroll), Local USB country keyboard, local power cord option
- Rack Rails: Rack chassis with Sliding/Versa Rails and Cable Management Arm
- The SE2512 ships with Windows 7 Windows for Embedded Systems installed and includes a Windows 7 image DVD. This computer will support both English and non-English versions of DeltaV and includes the language MUI DVD required for installing a localized non-English version of DeltaV. This unit does not come with a Windows 7 O/S reinstall DVD. The image DVD is the only method available to reinstall the O/S on this computer. Note that Windows for Embedded Systems licenses do not support downgrade rights this computer cannot be converted to XP as we do not provide an XP license kit for this purpose.
- The VE2552 ships with Windows XP Embedded OEM installed and includes a Windows XP image DVD. This computer will support both English and non-English versions of DeltaV and includes the language MUI DVD required for installing a localized non-English version of DeltaV. This unit does not come with a Windows XP O/S reinstall DVD. The image DVD is the only method available to reinstall the O/S on this computer. Note that Embedded OEM licenses do not support downgrade rights. This computer is licensed for XP only and is not Windows 7 downgraded to XP. Future upgrades of this computer to any new O/S version will require purchase of a new Microsoft Windows license. Windows 7 cannot be installed on this computer unless a Windows 7 upgrade kit is purchased to obtain the proper Microsoft O/S licensing.
- Chassis: 2U rack mount
- Height: 3.40 in (86.3mm), Width: 17.34in (440.60mm), Depth: With front bezel 28.84 in (732.54mm)
- Weight: With front bezel 52.71 lb. (23.91 kg)
- Power supply: Dual redundant power supplies (hot swappable). Each supply 1100W 92% plus efficiency Maximum heat dissipation for 1100W power supply: 1819.1 BTU/hr with 15 amp power cables
- Maximum vibration (using a random-vibration spectrum that simulates user environment) -
  - Operating: 5 to 350Hz at 0.0002G/Hz
  - Storage: 5 to 500Hz at 0.001 to 0.01G/Hz
- Maximum shock -
  - Operating: 40G +/- 5% with pulse duration of 2msec +/- 10% (equivalent to 20in/sec [51cm/sec])
  - Storage: 105G +/- 5% with pulse duration of 2msec +/- 10% (equivalent to 50in/sec [127cm/sec])



**SE2512 or VE2552 —DeltaV Rack Mount Workstation—Single and Dual Monitor workstation [based on Dell R5500]**

***The rack mounted workstation is only supported on DeltaV v9.3 and newer versions***

**Specifications for the FX100 Remote Access Device**

- One FX100 Remote Access Device (KVM)

Chassis size: Height 9.13" (232 mm), Width 3.7" (94mm), Length 6.85" (174 mm)  
Kensington® Lock port

**Environmental**

Air Flow: Natural convection – top down with side vents unit must be mounted vertically

BTU/hr: At nominal 15W AC power operation ~52 BTU

At full 25W AC power operation ~85 BTU

Sound Level (db): 0 db – fanless with no moving parts

**Power Consumption**

12v DC, 30 watts or less, Current at 115V: 150mA (nominal)

10W (0.8A) DC nominal – using a 36W AC/DC adapter

Current at 200V: 75mA (nominal)

2.5mm inside diameter and 6.5mm outside diameter

1 DC-in jack

External power adapter with worldwide autosensing

100-240v VAC, 50/60 Hz support.



The FX100 has dual video outputs and will support DeltaV Dual Monitor workstations

**The VE2552 and SE2512 come complete with all components below (except network cable)**



**Installation Note:**

If the rack mounted workstation is installed within 100m of the monitor/mouse/keyboard, then using dedicated point to point Ethernet-wired connections between the PC and FX100 is required..

If distance is longer than 100m, then dedicated point to point fiber connections using media converters are required to extend length.

The use of patch panels as part of the wiring between the PC and FX100 is strongly discouraged due to possible network issues introduced using these devices. Dedicated wiring runs are strongly recommended for FX100 connections.

We only support dedicated point to point connections from the PC to the FX100 device. If a switched network solution will be used between multiple workstations and remote FX100 devices it must be a network dedicated to serving the FX100 devices and must not be shared with any other communications and Ethernet network planning and design will be required for a successful implementation. Consult Emerson Process Management SureService to obtain a quotation for assistance with this network planning.

**SE2513 —DeltaV Rack Mount Quad Monitor workstation [based on Dell R5500]*****The quad monitor rack mounted workstation is only supported on DeltaV v11.3 and newer versions***

- 3 network interface ports
- CPU: Single Intel Xeon Quad Core processor
- Memory: 4GB,
- Drives: Qty 2- 250GB in a RAID 1 configuration
- 8x DVD +/- RW Drive
- On-board integrated audio
- Video: Qty 2 - ATI FirePro V2270 dual DVI graphics card (quad-monitor capable) (**Note**—Enabling the use of more than 2 monitors requires the use of a DeltaV 4 monitor license). The video card provides one DVI output using an included splitter cable to provide dual DVI outputs. There are no VGA ports available on the video card. There are no DVI to VGA adaptors included. Each video card supports up to 2 monitors.
- **External KVM Extenders must be purchased separately using the KVM solutions provided in the Alliance program.** (The SE2513 does not support an FX100 and the FX100 interface card is not installed on this computer)
- Speakers: Dell two-piece stereo speakers
- USB Optical mouse (2 button w/scroll), Local USB country keyboard, local power cord option
- Rack Rails: Rack chassis with Sliding/Versa Rails and Cable Management Arm
- The SE2513 ships with Windows 7 Windows for Embedded Systems installed and includes a Windows 7 image DVD. This computer will support both English and non-English versions of DeltaV and includes the language MUI DVD required for installing a localized non-English version of DeltaV. This unit does not come with a Windows 7 O/S reinstall DVD. The image DVD is the only method available to reinstall the O/S on this computer. Note that Windows for Embedded Systems licenses do not support downgrade rights and XP cannot legally be installed on this computer.
- Chassis: 2U rack mount
- Height: 3.40 in (86.3mm), Width: 17.34in (440.60mm), Depth: With front bezel 28.84 in (732.54mm)
- Weight: With front bezel 52.71 lb. (23.91 kg)
- Power supply: Dual redundant power supplies (hot swappable). Each supply 1100W 92% plus efficiency Maximum heat dissipation for 1100W power supply: 1819.1 BTU/hr. with 15 amp power cables
- Maximum vibration (using a random-vibration spectrum that simulates user environment) -
  - Operating: 5 to 350Hz at 0.0002G/Hz
  - Storage: 5 to 500Hz at 0.001 to 0.01G/Hz
- Maximum shock -
  - Operating: 40G +/- 5% with pulse duration of 2msec +/- 10% (equivalent to 20in/sec [51cm/sec])
  - Storage: 105G +/- 5% with pulse duration of 2msec +/- 10% (equivalent to 50in/sec [127cm/sec])



**SE2515 or VE2554—DeltaV Dual/Quad Monitor Workstation [based on Dell T3600 workstation]  
(DeltaV has consolidated the dual and quad workstations into a single computer)**



- 3 Network Interface Ports
- Intel Quad Core processor
- Memory: 4GB
- Drives: 2 - 250GB or greater hard-drives – installed in a RAID 1 configuration.
- DVD+/-RW
- On-board integrated audio
- Video: Qty:2 Dell's OEM version of the ATI FirePro V4900 card, dual DVI or DisplayPort graphics card (dual-monitor capable) Each video card provides one DVI and 2- DisplayPort outputs. A DisplayPort to DVI adaptor is included to create dual DVI outputs. There are no VGA ports available on the video card. There is 1 DVI to VGA adaptor included. If more VGA outputs are required a DisplayPort to VGA adaptor must be purchased locally. Video card supports up to 2 monitors - either 2 DisplayPort outputs or one DisplayPort and one DVI port. (Please contact Emerson for the latest information on the approved adaptor)
- Speakers: stereo speakers
- USB Optical mouse (2 button w/scroll)
- Local USB country keyboard (for languages supported)
- Local power cord option
- The SE2515 ships with Windows 7 Windows for Embedded Systems installed and includes a Windows 7 image DVD. This computer will support both English and non-English versions of DeltaV and includes the language MUI DVD required for installing a localized non-English version of DeltaV. This unit does not come with a Windows 7 O/S reinstall DVD. The image DVD is the only method available to reinstall the O/S on this computer. Note that Windows for Embedded Systems licenses do not support downgrade rights and XP cannot legally be installed on this computer. If you need an XP based computer you MUST order the VE number version. Windows 7 computers cannot be converted to XP as we do not offer an XP license kit for this purpose.
- The VE2554 ships with Windows XP Windows for Embedded Systems installed and includes a Windows XP image DVD. This computer will support both English and non-English versions of DeltaV. This unit does not come with a Windows XP O/S reinstall DVD. The image DVD is the only method available to reinstall the O/S on this computer. Note that Windows for Embedded Systems licenses do not support downgrade rights. This computer is licensed for XP only and is not Windows 7 downgraded to XP. Future upgrades of this computer to any new O/S version will require purchase of a new Microsoft Windows license. Windows 7 cannot be installed on this computer unless a Windows 7 upgrade kit is purchased to obtain the proper Microsoft O/S licensing.
- Chassis: Convertible Mini-tower

(H x W x D): 16.3" x 6.8" x 18.54" (H x W x D): 41.4cm x 17.3cm x 47.1cm

Weight: 29.1 lb. (16.3 kg)

- Power—635-watt power supply
- See the single monitor workstation specifications for environmental requirements.

**SE2407 DeltaV server based Workstation—General Specifications [based on Dell T620 server]  
(This workstation is compatible only with DeltaV v11.3 and newer)**

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

**Servers for use with Server 2003 must be purchased using the refurbished computer hardware available from DeltaV please consult with Installed Base support for information on the refurbished computer program**

*The SE2407 is the replacement for the SE2402 Server (based on the Dell T310 server). This is a lower priced version of the SE2406 Server (based on the Dell T620 Server) configured to provide similar capabilities as the retired SE2402 but in a computer that can be upgraded in the field if a larger server becomes required to support the system.*

- Four Ethernet ports
- Single CPU Quad Core Intel® Xeon® E5-26031.8 GHz
- Integrated VGA Controller
- Memory: 4GB
- Drives: Two 300GB setup in a RAID 1 configuration
- DVD+/-RW drive
- USB Optical mouse (2 button w/scroll), Local USB country keyboard, Local power cord option
- SE2407 includes Windows Server 2008 license and a Server 2008 image DVD. Windows Server 2008 operating system comes pre-installed and includes a Server 2008 image restore DVD. The SE2407 version should be ordered for use with Server 2008 versions of DeltaV. Includes 5 server CAL licenses. For Server 2008 only - MUI is not required. Language support included with DeltaV overpack.
- Tower dimensions (without bezel): 443.5mm H w/feet x 304.5mm W x 708.7D with bezel
- Tower weight 43.3 kg (95 lb.), maximum configuration
- Single, hot-pluggable 750W power supply
- Vibration: Operating: 0.26G at 5Hz to 350Hz for 2 minutes , Storage: 1.54Grms Random Vibration at 10Hz to 250Hz for 15 minutes
- Shock: Operating Shock: 1 shock pulse of 41G for up to 2ms, Storage: 6 shock pulses of 71G for up to 2ms
- Note: Servers do not have PS/2 ports or parallel ports. Requires the use of a USB dongle.



This server does support wide screen monitor resolutions, but does not support multi-monitors or sound cards (no speakers provided with servers)

**SE2406 DeltaV server based Workstation—General Specifications [based on Dell T620 server]  
(This workstation is compatible only with DeltaV v11.3 and newer)**

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

**Servers for use with Server 2003 must be purchased using the refurbished computer hardware available from DeltaV please consult with Installed Base support for information on the refurbished computer program**

- Hot-pluggable drive backplane
- Redundant, hot-pluggable 750W power supplies
- 4 Ethernet ports 2 on motherboard and 2 on an add-in dual-port NIC
- 6 USB ports on back panel
- Integrated graphics controller with wide screen support (wide screen has been tested using our supported Dell P2213 monitor at 1680x1050 resolution and 16 bit color depth using a direct connection to the VGA port. Other monitors and KVM solutions may function without issues but have not been tested and may not be supported)
- DVD-R/W drive
- RD1000 backup storage unit and removable 160GB cartridge
- USB mouse (2 button w/ scroll)
- Local USB country keyboard and Local power cord option
- SE2406 includes Windows Server 2008 Standard Edition licensed under Server 2008 for Embedded Systems. Server 2008 is pre-installed and includes Server 2008 image DVD. The SE2406 version should be ordered for use with Server 2008 versions of DeltaV. Includes 10 server CAL licenses. For Server 2008 - MUI is not required. Language support included with DeltaV overpack.
- OS License Certification Label
- Tower dimensions (without bezel): 443.5mm H w/feet x 304.5mm W x 708.7D with bezel
- Tower weight 43.3 kg (95 lb.), maximum configuration
- Vibration: Operating: 0.26G at 5Hz to 350Hz for 2 minutes , Storage: 1.54Grms Random Vibration at 10Hz to 250Hz for 15 minutes
- Shock: Operating Shock: 1 shock pulse of 41G for up to 2ms, Storage: 6 shock pulses of 71G for up to 2ms
- Note: Servers do not have PS/2 ports or parallel ports. Requires the use of a USB dongle.



This server does support wide screen monitor resolutions, but does not support multi-monitors or sound cards (no speakers provided with servers)

**SE2406C1-Tower Chassis Single Xeon Six Core CPU Server**

- Drives: Two 600GB or greater SAS hard-drives in a RAID 1 Array
- Single CPU - Intel Xeon E5-2620 2.00GHz 6 cores
- Memory: 16GB

**SE2406C2- Tower Chassis Dual Xeon Six Core CPU Server**

- Drives: Six 600GB or greater 15K RPM SAS hard-drives in RAID 10 Array
- Two CPUs - Intel Xeon E5-2620 2.00GHz 6 cores
- Memory: 16GB

**SE2405- Rack-mount Xeon Six Core CPU Server General Specifications [based on Dell R720 server] (This workstation is compatible only with DeltaV v11.3 and newer)**

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

**Servers for use with Server 2003 must be purchased using the refurbished computer hardware available from DeltaV please consult with Installed Base support for information on the refurbished computer program**

- 2U Rack-mountable chassis with sliding ready rails and cable management arm
- 16GB Memory
- 4 Ethernet ports all on the motherboard [no add-in NIC cards]
- 4 USB ports – 2 back panel and 2 on front panel
- Integrated graphics controller with wide screen support (wide screen has been tested using our supported Dell P2213 monitor at 1680x1050 resolution and 16 bit color depth using a direct connection to the VGA port. Other monitors and KVM solutions may function without issues but have not been tested and may not be supported)
- Hot-pluggable drive backplane
- Redundant, hot-pluggable 750W power supplies
- SE2405 includes Windows Server 2008 Standard Edition licensed under Server 2008 for Embedded Systems. Server 2008 is pre-installed and includes Server 2008 image DVD. The SE2405 version should be ordered for use with Server 2008 versions of DeltaV. Includes 10 server CAL licenses. For Server 2008 - MUI is not required. Language support included with DeltaV overpack
- DVD+/- R/W drive
- USB mouse (2 button w/ scroll)
- Local USB country keyboard
- Local power cord option
- Rack Server Dimensions 29.31" (74.4cm) D x 17.5" (44.43cm) W x 3.4" (8.64cm) H with bezel attached
- Rack Server Weight 50.71 lbs. (23 Kg), maximum configuration
- Note: Servers do not have PS/2 ports or parallel ports. Will require the use of a USB DeltaV dongle.



**Environmental**

- Vibration: Operating: 0.26G at 5Hz to 350Hz for 2 minutes, Storage: 1.54Grms Random Vibration at 10Hz to 250Hz for 15 minutes
- Shock: Operating: 1 shock pulse of 41G for up to 2ms, Storage: 6 shock pulses of 71G for up to 2ms

Servers do not support multi-monitors, sound cards (no speakers provided with servers)

**SE2405C1- Rack mount Single Xeon Six Core CPU Server**

- Two SAS hard-drives, 600GB or greater in a RAID1 Array
- Single CPU - Intel Xeon E5-2620 2.00GHz, 6 cores

**SE2405C2 - Rack-mount Dual Xeon Six Core CPU Server**

- Six SAS hard-drives 600GB (or greater) drives in a RAID10 Array.
- Two CPUs- Intel Xeon E5-2620 2.00GHz, 6 cores

**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.

The Windows for Embedded Systems O/S software is exactly the same as the Dell OEM version we previously supplied on the workstations and servers. The user will experience no operational difference with the Windows for Embedded Systems O/S from the Dell OEM version previously supplied.

The Windows for Embedded Systems license does introduce the following new situations:

Computers supplied with "Windows for Embedded Systems" licenses are licensed only for the operating system purchased with the computer and do not have “downgrade rights”. Any change to the license shipped with the computer requires the purchase of a new O/S license. Windows 7 or Server 2008 computers cannot be converted to XP or Server 2003 computers as we do not offer any Embedded License kits for this purpose. New Server 2008 computers cannot be downgraded to Server 2003 as the servers do not support the older operating system.

The DeltaV SE and VE numbered computers using the "Windows for Embedded Systems" license must only be used as a DeltaV workstation and remain connected to the DeltaV LAN. These computers may not be purchased for use as general purpose computer or used for applications where DeltaV is not installed or DeltaV is not primary use for the computer.

As a Windows for Embedded Systems licensed vendor Emerson can continue to provide Windows XP licenses on new computers (even though XP is no longer available from other suppliers) and to provide Windows 7 and Server 2008 Upgrade kits which can only be purchased from Emerson.

**As of this release of SE2405 and SE2406 Servers all DeltaV workstations (except the VE2545 or SE2402— DeltaV servers) are using Embedded licenses.**

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

Only the specific KVM products listed in the Alliance program data sheet are supported with DeltaV. If you have requirements for a KVM extender or switch that cannot be met by these KVM solutions you must submit an engineering request for a supported solution. 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 (VE and SE numbers) are listed in the sections above. These specifications are subject to change without notice. We guarantee that the computers sold for use with the DeltaV system will provide performance and storage space 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 or VE number.

**Note:** *The computer specifications provided in this data sheet describe the computers 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.*

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.

**Important Note on Ordering Numbers**

The SE numbered computers are hardware identical to the VE numbered computers with the exception that the SE computers come with Windows 7 or Server 2008 image DVDs and the VE computers come with XP or Server 2003 image DVDs.

***For DeltaV v11.3/v11.3.1 based systems you must order the SE based order numbered computers.***

***For other DeltaV versions you must order the VE based order numbered computers.***

***Due to the use of Windows for Embedded Systems licenses if you order the incorrect XP or Windows 7 license the computer cannot be converted to the other operating system without purchasing a new operating system license.***

***NOTE: We are not able to provide the XP licenses to convert Windows 7 licensed computers to XP licensed computers.***

**Note about modifying DeltaV Workstation Hardware configurations**

DeltaV workstations are delivered with sufficient memory, hard drives and network interface cards and other hardware to support all 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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**To locate a sales office near you, visit our website at:**

**[www.EmersonProcess.com/DeltaV](http://www.EmersonProcess.com/DeltaV)**

**Or call us at:**

Asia Pacific: 65.6777.8211

Europe, Middle East: 41.41.768.6111

North America, Latin America: +1 800.833.8314 or  
+1 512.832.3774

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