

DeltaV™ Workstation Hardware



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

- Pre-installed Operating System software for ease of deployment
- Available with Microsoft 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 monitors

Introduction

DeltaV™ software runs on a limited variety of Dell Intel-based computers. Available using workstation hardware with single, dual 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.

Do not alter the order (or titles) of the sections of the document. It may be that certain sections are not applicable to certain PDS documents, and it is ok to omit them where applicable.



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 (CAN), 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. 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. You can increase your viewing space with dual 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.

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. There are no new computers available to support 7.1-7.4.1 DeltaV 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.

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.

CE2563 DeltaV Operator Workstation – single/dual monitor [based on Dell 7010 desktop computer]

- Desktop chassis
- 2 Network Interface Ports, 1 onboard plus 1 add-in NICs
- Single Intel processor CORE i3-3220 3.3 GHz
- Memory: 2.0GB
- Drives: 250GB
- 16x DVD ROM drive
- On-board integrated audio
- On-board integrated video, (supporting single or dual monitor)
- Internal Speaker
- Integrated PS/2 ports for keyboard and mouse
- USB Optical mouse (2 button w/scroll)
- USB Local country keyboard
- Local power cord
- The CE2563L08 ships with Windows 7 Windows for Embedded Systems installed and includes a Windows 7 image DVD. This computer will support both English and Chinese versions of DeltaV and includes the Simplified Chinese MUI DVD required for installing DeltaV Chinese version R2. 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. This computer cannot be converted to XP as we do not provide an XP license kit for this purpose.
- The CE2563L39 ships with Windows 7 Windows for Embedded Systems installed and includes a Windows 7 image DVD. This computer will support English versions of DeltaV only. 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. This computer cannot be converted to XP as we do not provide an XP license kit for this purpose.
- CHASSIS DIMENSIONS:
 - Height 36.0 cm (14.17 inches), Width 10.2 cm (4.02 inches), Depth 41.0 cm (16.14 inches)
Weight 7.56 kg (16.67 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)



CE2561 DeltaV server based Workstation—General Specifications [based on Dell T620 server]

- Integrated graphics controller
- 4 GB Memory
- Hot-pluggable drive backplane
- Redundant Power Supply, 750W
- 4 Ethernet ports 2 on motherboard and 2 on an add-in dual-port NIC
- 6 USB ports on back panel
- 16X DVD+/-RW drive
- USB mouse (2 button w/ scroll)
- Local USB country keyboard and Local power cord option
- The CE2561 includes Windows Server 2008 license and a Server 2008 image DVD. This computer comes with the Server 2008 operating system installed
- Specify the "L08" for Simplified Chinese MUI DVD option when ordering and specify the "L39" for English Version
- Tower dimensions (without bezel): 18.85" (47.89cm) H w/feet x 8.92" (22.66cm) W x 26.55" (67.43cm) D; (including LCD panel).
- Tower weight 49.9 kg (110 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.



Servers do not support wide screen monitor resolutions, multi-monitors or sound cards (no speakers provided with servers)

CE2562 Rack-mount DeltaV server based Workstation—General Specifications [based on Dell R720 server]

- 2U Rack-mountable chassis with sliding ready rails and cable management arm
- 4 GB 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
- Hot-pluggable drive backplane
- 16X DVD +/- RW drive
- Redundant Power Supply, 750W
- Specify the “L08” for Simplified Chinese MUI DVD option when ordering and specify the “L39” for English Version
- 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 wide screen monitors resolutions, multi-monitors, sound cards (no speakers provided with servers)

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. 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 computers cannot be converted to XP computers as we do not offer an XP License kit for this purpose.

The DeltaV CE 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.

At this time only Windows 7 and XP are using Embedded licenses. Server continue to use a standard Dell OEM license and the above information does not apply to servers.

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 (CE 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 CE 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.

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

Or call us at:

Asia Pacific: 65.6777.8211

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For large power, water, and wastewater applications

contact Power and Water Solutions at:

www.EmersonProcess-powerwater.com

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