

High performance display wall processor for control rooms and large scale visualisation systems

- Up to 64 output channels per system
- Up to 128 freely moveable video inputs per system
- Up to 62 channels DVI / VGA inputs
- Redundant power supplies, fans and RAID redundant disk controller
- Multiple client control stations
- Multi mouse cursor application control

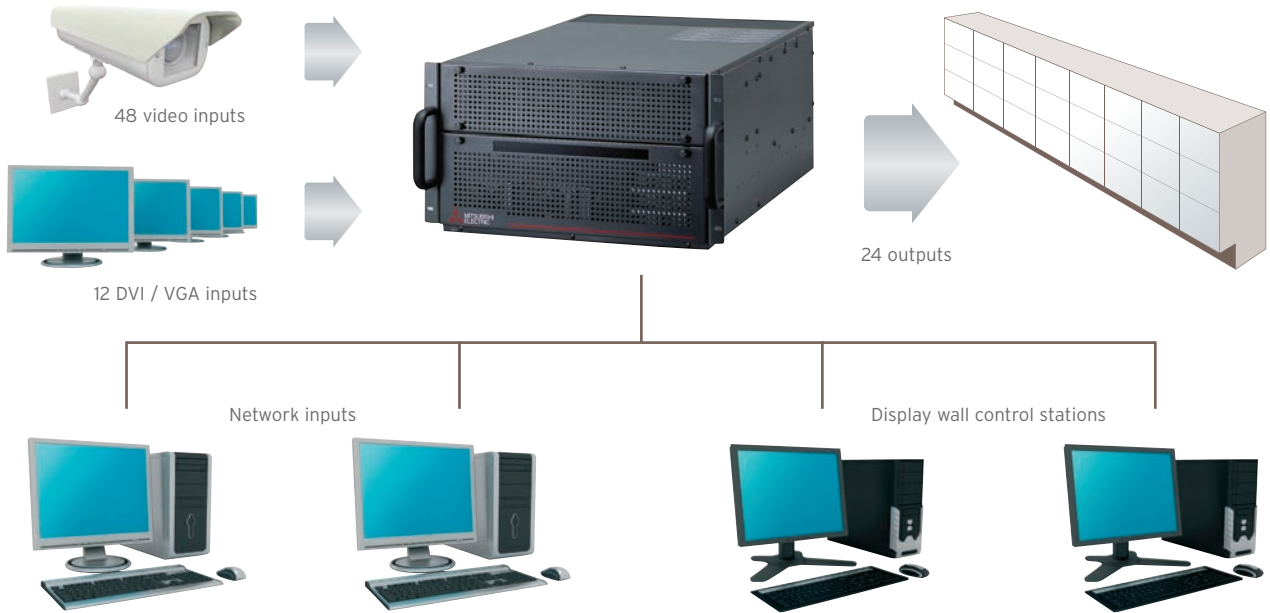


VC-X3000 DISPLAY WALL PROCESSOR

The VC-X3000 display wall processor puts all of your data and video on the display wall just the way you want to see it. With great flexibility and ease of use, the system is highly reliable with redundant power supplies, fans and RAID disks. The VC-X3000 also manages the display wall itself, monitoring and controlling brightness, lamp changers, power on / off and key operating parameters. The remote client D-Wall software allows multiple operators to create and select layouts and configure display windows and multi mouse cursor support allows users to interact with the applications displayed on the wall.

Without adding an expansion chassis, the VC-X3000 processor can provide 24 outputs, 48 video inputs, 12 DVI / VGA inputs and unlimited network inputs - all in one unit. One or two VC-EX3000 expansion chassis may be added to provide 64 output channels and 128 video inputs and / or 62 DVI / VGA capture channels.

12 DVI / VGA inputs and 48 video inputs displayed on 24 outputs



Alternative configurations for VC-X3000 without using the VC-EX3000 expansion chassis

16 DVI / VGA inputs and 16 video inputs - with 24 outputs



24 DVI / VGA inputs and 12 outputs



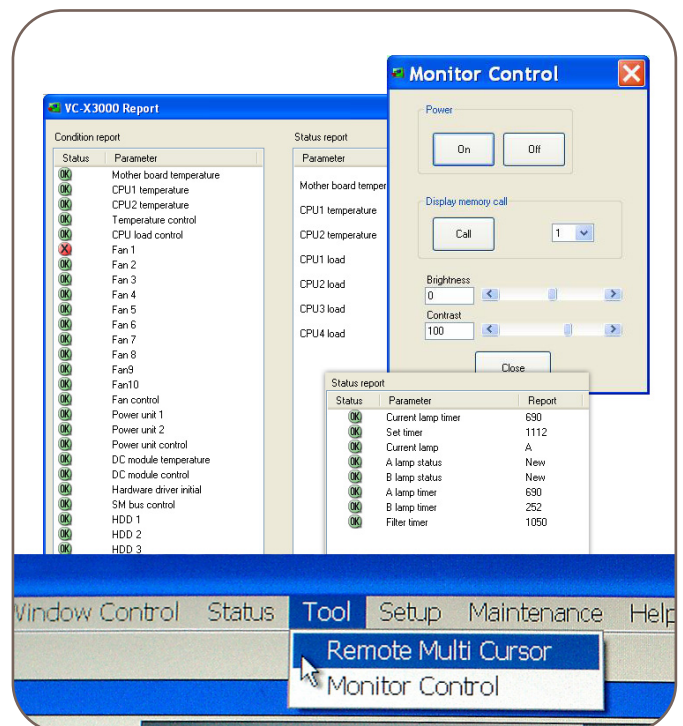
When 2 expansion chassis are added, the VC-X3000 system provides up to 64 outputs with 128 video inputs and 34 DVI / VGA inputs. 128 video inputs and / or 62 DVI / VGA inputs can be configured if fewer output cards are used.

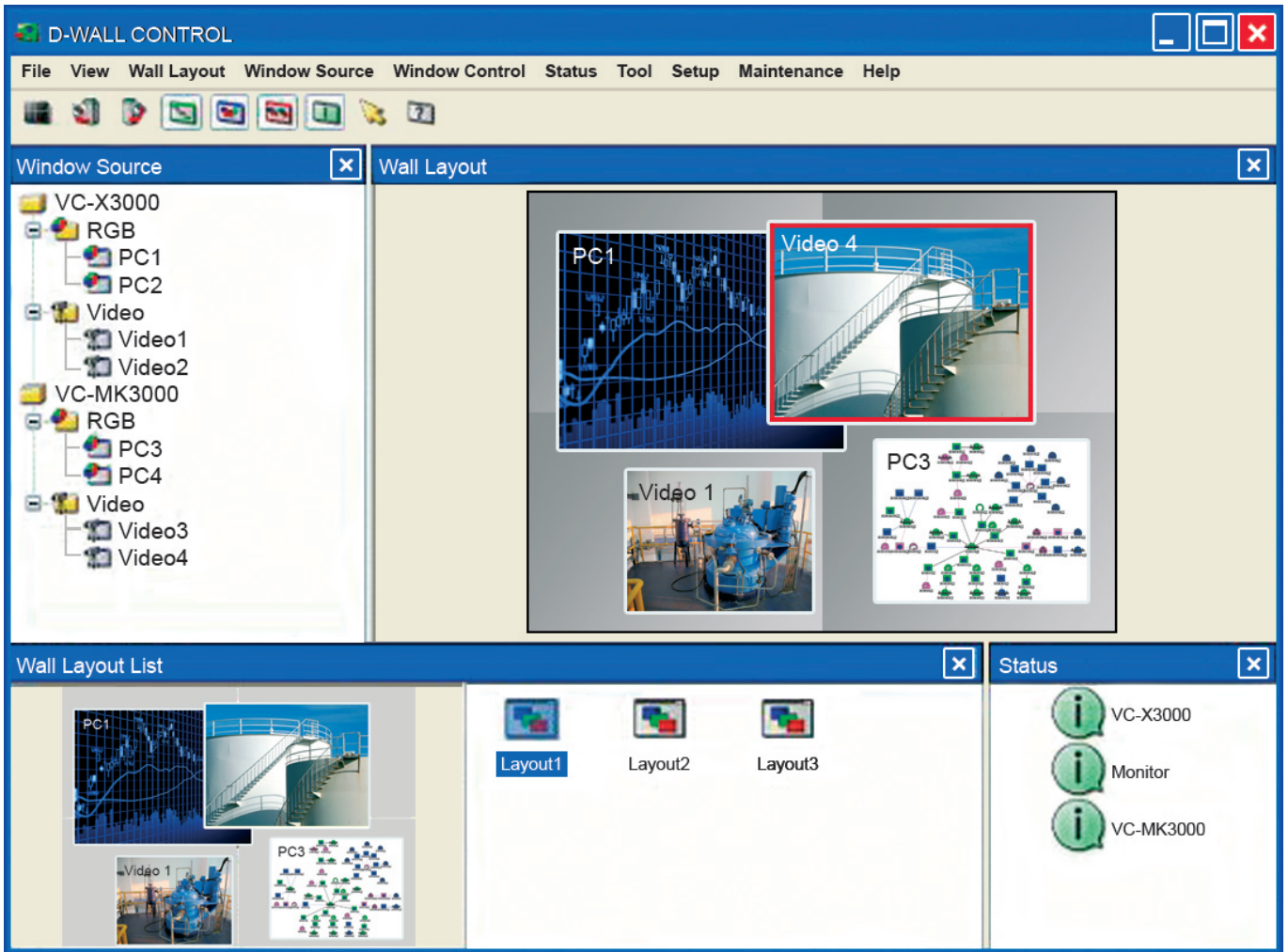


This shows an example of the maximum configuration for one system. Larger installations can be configured as separate display wall areas, under software control, or by assigning a quad of 4 cubes to display one processor output. Using quads in this way, a wall of up to 256 cubes with 4 video windows per cube (16 per quad) can be realised.

Display wall processor and controller

The X3000 not only processes the windows to be shown on the display wall, it also controls the wall itself. The D-Wall software suite allows operators and supervisors to switch the wall on and off, adjust brightness and lamp modes and monitor key parameters of the display wall and of the processor. If anything needs attention the status window explains the situation and users can be alerted by email.





The VC-X3000 D-Wall software suite manages all aspects of set up, configuration, and daily use of the display wall. Firstly the D-Wall Configure software is used to set up the display wall system. It is installed on the VC-X3000 and can be managed from a remote client PC. The system integrator uses D-Wall Configure to recognise the features of the display wall cubes in the wall, set up the wall size and establish the default values for the parameters that may be changed later by the users.

Next the D-Wall Server software is installed on the VC-X3000 to control all of the devices in the system.

Finally the D-Wall Control software is installed on the operators' PCs. D-Wall Control is used by the system operators and supervisors to adjust, control and monitor the system. Wall layouts can be created, saved and recalled by drag and drop or by clicking an icon. Window parameters such as brightness, borders, cropping etc. can be managed - and windows can be labelled and placed as required.

D-Wall Control graphically displays inputs, current layout, stored layouts and system status information for the processor and the display wall cubes with image 'thumb nails' on the windows. Daily operation is carried out by drag and drop, mouse click and by monitoring the status display. D-Wall Control can be hidden from view, and set to respond to touch panel control for a really safe and simple user interface.

D-Wall can also control the MK-3000 graphics insertion processor, which can be used on its own or in combination with the VC-X3000. A hybrid system using both processors still presents the same unified image to the operator - and windows are controlled in the same way whether they are from the VC-X3000 or the MK-3000.

SPECIFICATIONS - VC-X3000

Chassis	
CPU	Dual-Core Intel® Xeon® Processor LV 1.66GHz x 2
System memory	1 GB (PC2-4200 512 MB Registered ECC DIMM x 2) Expandable up to 3 GB
Power supply	Hot swap dual redundant power supply units - front access
Hard disk drive	80 GB (SATA 300) x 2 (RAID 1) One optional HDD can be added to support RAID1+Hot Spare or RAID 5
Power supply	AC 100 - 120V, 200 - 240V ±10%, 50/60 Hz ±3Hz Power consumption 9.6A (AC 100 - 120V), 4.8A (AC200 - 240V)
Dimensions	483 mm (w) x 265 mm (h) x 678 mm (d) (excluding protrusions)
Weight	33 kg
4 Channel output board - Overlay Multi Graphic Board BX3000M-OMG	
Resolution	(800 x 600) to (1400 x 1050), (1920 x 1080)
Output connectors (X4)	Digital : DVI-D Analogue : DSUB
Maximum number of boards / channels	6 boards / 24 channels per chassis 16 boards / 64 channels per system (using expansion chassis)
Video overlay windows from video input board	16 windows per cube, 128 windows per system. Freely movable, can be overlapped
4 Channel output board - Multi Graphic Board BX3000M-MG	
Resolution	(800 x 600) to (1400 x 1050)
Output connectors (X4)	Digital : DVI-D Analogue : DSUB
Maximum number of boards / channels	8 boards / 32 channels per chassis
Video overlay windows from video input board	Not available
16 Channel video input board - BX3000V16	
Number of inputs	32 composite or 16 YC
Number of channels / windows	16
Video standards	NTSC / PAL / SECAM
Resolution	720 x 288
8 Channel video input board - BX3000V8	
Number of inputs	16 BNC (8 composite or 8 S-video) 4 extra inputs (for component YPrPB or RGB up to 1080i)
Number of high quality video windows with de-interlacing, noise reduction	4 windows (displaying 720 x 576 up to 1280 x 1024)
Number of standard quality windows	4 windows (displaying 720 x 288)
Video standards	NTSC / PAL / SECAM / HD (720p / 1080i)
2 Channel DVI / VGA input board - BX3000G2-DVI	
Resolution	(640 x 480) to (1920 x 1080)
Input channels	2 DVI / VGA inputs per card, up to 62 per system depending on available slots
Maximum sampling rate	170 Mpixels per second 24 bits per pixel
Update rate	Triple buffered. Up to 60 frames per second
Analogue RGB modes	640 x 480 to 1920 x 1080 RGBHV or RGB comp sync or sync on green
DVI modes	640 x 480 to 1600 x 1200 DVI single link
Connectors	DVI-I connectors for analogue or digital connection

VC-MK3000

The VC-X3000 display wall processor can also be used together with the VC-MK3000 Graphics Insertion Processor to create the ultimate hybrid system with real time DVI / VGA capture and gen-locked synchronous video. The remote client D-Wall software controls the windows from both systems creating a single layout that seamlessly merges X3000 windows and MK3000 sources. More details are available in the MK3000 brochure and the application note - VC-X3000 / MK3000 hybrid systems.



Notes:

1. 8 of the 4 Channel output boards (BX3000M-MG) can be installed in one chassis to give 32 outputs. This board does not support video overlay.
2. 6 of the 4 Channel output boards (BX3000M-OMG) can be installed in one chassis to give 24 outputs. This board supports video overlay - see below for details.
3. The two types of 4 output board (BX3000M-OMG and BX3000M-MG) cannot be mixed in the same system. So, if video windows are required, the OMG version must be used.
4. The 4 Channel output board (BX3000M-OMG) supports 16 video overlays for each output (64 per board). Video inputs from the video capture board are transferred by dedicated video bus.
5. Up to 8 of the 16 channel video capture boards (BX3000V16) can be connected to the output boards by dedicated video bus to give 128 SD video windows. This is subject to the limit of 15 slots per chassis and 6 output boards per chassis. The maximum number of cards is also limited by power and cooling considerations. Video windows are always captured and displayed in real time. If large numbers of videos share the same video bus (so they can be moved anywhere on the wall) image data for small windows is compressed before transfer. Preference is given to large windows, to maintain the overall image quality.
6. Up to 4 of the 8 channel video capture boards (BX3000V8) can be connected to the output boards by dedicated video bus to give 32 video windows. (16 HD and 16 SD)
7. The 8 channel video capture board (BX3000V8) has 8 video inputs, 4 SD decoders and 4 HD decoders. In the context of video capture, SD means composite or S-video up to 720 x 288 and HD means composite or S-video or RGB from 720 x 576 up to 1080i. This board provides very high quality video in 4 windows and standard video in the other 4 windows.
8. The processor is supplied with DVI or VGA output connectors as ordered.
9. DVI / VGA capture data is transferred to the output cards by PCI bus. Image capture data is downscaled before being transferred, so that 4 DVI / VGA capture windows displayed on one cube will each be 25% of normal size, so that data is downscaled by a factor of 4 before transfer. This means that the system can display 4 RGB windows on one cube with the same refresh rate as one large RGB window. RGB windows displayed over more than one cube are up-scaled after data transfer, so the data transfer rate does not exceed that of one full size window.

