ADPRO Video Central Platinum

Video Wall Manual

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The following typographic conventions are used in this document.

Convention	Description
Bold	Used to denote: emphasis Used for names of menus, menu options, toolbar buttons
Italics	Used to denote: references to other parts of this document or other documents. Used for the result of an action

The following icons are used in this document.

Icon	Description
	Note. This icon indicates information of special interest that will help the reader make full use of the product, optimise performance, etc. Failure to read the note will not result in physical harm to the reader, or damage to equipment or data.
	Caution! This icon indicates danger to equipment. The danger can be loss of data, physical damage to the equipment, or permanent corruption of configuration details.
	Warning! This icon indicates danger of physical harm to the reader. Not following instructions may lead to death or permanent injury.
	Warning! This icon indicates danger of electric shock. This may lead to death or permanent injury.
	Warning! This icon indicates that there is a danger of inhaling dangerous substances. This may lead to death or permanent injury.

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Contents

1 What's New 5

2 Purpose 10

3 Prerequisites 11

4 HeiTel Support 12

5 Specifications 13

5.1 PC Specifications 13

5.2 System Specifications 13

5.3 System Configuration 13

5.3.1 Video Wall User Permissions 13

5.4 Firewall Requirements 13

5.4.1 Video Central Platinum Specific Firewall Requirements 14

6 System Overview 15

7 Video Central Platinum Video Wall Installation 16

8 Video Wall Configuration 19

8.1 Video Performance 21

8.1.1 Protection Mode 21

8.1.2 Picture Qualities Behaviour 22

8.1.3 Starting Video Wall 22

8.2 Advanced Video Quality Configuration 23

9 Operation 26

9.1 Video Wall Tab 26

9.2 Status 27

9.3 Initial state 28

9.4 Configuring a Video Wall Monitor 28

9.5 Connecting to the Site 30

9.6 Setting Splits 31

9.7 Populating a Monitor 31

9.7.1 Swapping Camera Positions 32

9.7.2 Removing a Camera from the Video Wall 33

9.8 Video Wall Image Status 33

9.9 Switching between Monitors 34

9.10 Saving and Loading Configurations 34

9.11 Switching between VCP UI and Video Wall Control 35

9.12 Viewing Sites on both the Video Wall and VCP UI 36

9.12.1 ADPRO XO and HeiTel Sites 36

9.12.2 Legacy Sites 36

9.13 Closing the Video Wall Controller on the Video Central User Interface 36

9.14 Closing the Video Wall 37

1 What's New

Feature	Description	Section Reference
New in 3.02.09		
Extended Operator Audit	Additional operator audit data was added.	Operational Manual, 2.28.7.2, Audit Log Descriptions
32 camera support	32 cameras are now supported.	NA
Fisheye Camera support	Fisheye cameras can be viewed in VCP.	Operational Manual, 2.22.12, Viewing a Fisheye (360°) Camera
New in 3.04		
Support for HeiTel in Diagrams	Diagrams now support HeiTel devices.	Setup and Configuration Manual, 2.22, Diagrams
Private Wall HeiTel support	The private wall now allows to show video from HeiTel devices.	Setup and Configuration Manual, 2.4.4, HeiTel Unit Programming
HeiTel GPS support	VCP supports tracking HeiTel GPS devices by using the Global Maps application.	Setup and Configuration Manual, 2.11.7, GPS Settings, 2.12.10, Global Maps Auto Start Operational Manual, 2.46, Global Maps
Live Video Snapshot support for HeiTel	It is now possible to take live video snapshots when streaming video from HeiTel devices.	Operational Manual, 2.22.10, Saving a Live Image
Talk-to-Site Audio File support for HeiTel	Audio files (mp3 and wav) can be configured for Talk-to-Site with HeiTel devices.	Setup and Configuration Manual, 2.13, Local Audio Setup (Play audio file to site)
HeiTel HTConnect support	VCP HeiTel sites can be configured to use HTConnect to connect to the associated devices.	Setup and Configuration Manual, 2.4.1, Setup of CamControl Server, 2.4.4, HeiTel Unit Programming
Bounding Box Configuration	The type of bounding boxes that are shown for alarm images (quad images) and live and review video can be selected.	Setup and Configuration Manual, 2.12.3, Bounding Box Setup
Event Monitoring	It is now possible to monitor events for occurrence, i.e. to check whether a given event has occurred within an expected timeframe.	Setup and Configuration Manual, 2.6.1.2.7, Event Monitoring Settings
Enhanced Database and Disk Size Warnings	Database and disk size warnings have been improved. Warnings will be repeated periodically if the issue at hand is not dealt with. If the issue becomes critical, the system monitor site cannot be cleared until the issue has been dealt with.	Database and Maintenance Manual, 2.1.4, Hard Drive Warnings, 2.1.5, Database Warnings
ASL Customisation	ASL column locations can now be changed. It is now possible to select which ASL columns are visible.	Setup and Configuration Manual, 2.12.11, Column Visibility
Time on ASL	The time how long a site is sitting on the ASL is displayed in a new ASL column "Accumulated Time".	Operational Manual, 2.16.1, ASL Explanation

Feature	Description	Section Reference
Additional Reports	Additional reports are available: • "User Response Report 2", for viewing average response time. • "User Response By Event", shows individual alarms and associated details. • "User Response By Event Type", shows alarms and associated details per sensor. • "User Response By Transmitter", shows alarms and associated details per transmitter. • "Isolations By Sensor", shows isolations and associated details per sensor. • "User Response By User", shows alarms and associated details per user. "User Response Key Metrics", shows user response key metrics.	Operational Manual, 2.45, Reports
New Export/Import of VCP Server Configuration	A new export/import mechanism allows to export/import VCP Server configuration (site details, user details, event priorities…) to/from an XML file. In order to prevent unexpected overwriting of data during import, an import rule can be set which defines how configuration data should be imported. A task is added to the Task Scheduler to allow for automated and scheduled export of the server configuration. A tool exists to convert the VCP legacy export files to the new XML format.	Setup and Configuration Manual, 2.11.8, Import Conflict Action Database and Maintenance Manual, 2.1.18, Exporting and Importing Site and User Data
System Monitor Message Selection	Now System Monitor messages can be enabled or disabled. The System Monitor site will not appear on the ASL for disabled messages.	Setup and Configuration Manual, 2.6.5, System Monitor Message Configuration
Troubleshooting FAQ for Setup	In case VCP setup fails, a troubleshooting FAQ is displayed.	NA
Language Selection in Active Language	The list of languages is now displayed in the language that is active.	Setup and Configuration Manual, 2.12.6, Language Setup
Event Comment enhancement	When adding comment on an event, the Event Comment dialog now contains some information which summarises the event at hand.	Operational Manual, 2.27, Entering Comments
Diagram Guard Tour enhancement	Additional diagram commands are added to allow to switch to the next or previous guard tour sequence: Video(MULTI,NEXTSEQUENCE) Video(MULTI,PREVIOUSSEQUENCE)	Setup and Configuration Manual, 2.22.4.1.1, Live Video Control
Enhanced Review on 20+ Channels	When reviewing more than 20 channels, the user can now switch between the first 20 cameras (cam 1–20) and last 12 cameras (cam 21–32).	Operational Manual, 2.43.9.3, Reviewing More than 20 Cameras
VCP Server autostart upon crash	It is now possible to configure VCP Server to automatically restart after the program has crashed.	Setup and Configuration Manual, 2.2, Start and Login for Multi User

Feature	Description	Section Reference
Guard Tour enhancement	The “All Cameras” guard tour option automatically selects the best camera layout for displaying all cameras on the device.	Operational Manual, 2.23, Conducting a Guard Tour
Enhanced PTZ Configuration	An option is added to allow to invert the Y-axis when controlling PTZ via a joystick. An option is added to show an indication of the centre of the screen when using PTZ.	Setup and Configuration Manual, 2.12.8, Joystick Settings
Support for new XO events	Added support for XO PIR events. Added support for “STORAGE INSUFFICIENT” event.	NA
Diagrams Workbits support	Diagrams now support XO device workbits.	Setup and Configuration Manual, 2.22, Diagrams
VCP SecureViewer Fisheye Cam enhancement	The VCP SecureViewer now supports dewarping exported fisheye camera video.	Secure Viewer User Manual, 4.3.16, Viewing a Fisheye (360°) Camera
Basic Integration enhancement	Basic Integration now supports sending event deactivation codes.	Setup and Configuration Manual, 2.15.2.1, Modifying the Translation Table
Enhanced Performance	Overall enhanced performance by database optimisation and caching.	NA
New in 3.05		
Additional Language	Added Polish translation.	NA
Archiving	Improved error notification in case archiving fails due to insufficient disk space.	NA
Configurable alarm images location.	Added support for setting the path to the EventExtraData folder in the SystemData table.	2.16 VCP Configuration Files and Folders
Configurable SQL Server edition and instance name.	It is now possible to select a pre-installed SQL database instance when installing VCP. Supported instances are SQL 2008 R2, SQL 2014, SQL 2016, and SQL 2017. The user is not forced to use “XTRALIS_CYCLOPS” as the name of the SQL Server instance.	VCP Installation Manual
Configuration files relocated	VCP related configuration files have been moved to the “ADPRO VCP” folder under the common application data folder. E.g. “C:\ProgramData\ADPRO VCP”. The configuration files include vcp_bi.ini, VCPClientConfig.xml, VCPAppLauncherConfig.xml, ADPROSW.config and GPSMapsSettings.xml.	2.16 VCP Configuration Files and Folders
Consolidated configuration file location	Temporary, backup and log files are moved to subfolders under the Common \ “ADPRO VCP” folder.	2.16 VCP Configuration Files and Folders
Convert export busy indication.	Tool now shows wait cursor while conversion is busy.	NA

Feature	Description	Section Reference
Enhanced Camera I/O	The camera I/O status page has been redesigned, allowing to isolate individual camera points.	Operational Manual 2.19.3 Camera I/O
Enhanced event search	Added a column to the Event Search dialog, showing the cameras associated with the event. Added a new search option in the Event Search dialog, to search for events linked with a specific camera.	VCP Operational Manual 2.42.1.3 EventSearch Results – Event tab
Enhanced IP configuration	Improved the appearance of the IP Configuration window that is displayed if the VCP UI is launched with a misconfigured bind-to-IP address.	NA
Event Detail	For the SITE CONNECT, SITE SELECT, SITE RELEASE, SITE DISCONNECT and SITE ACKNOWLEDGEMENT events, the Events list now contains the user name in the Detector Text column.	VCP Operational Manual 2.32
Event Search	In the VCP Event Viewer, which is launched via Event Search, the Next or Previous button used for cycling through alarm images, is disabled if there are no subsequent images to show.	NA
NetIO digital tamper event.	Added support for the new NetIO digital tamper events that are available on XO 4.2.	NA
New Bind To network settings	Added ability to configure .NET remoting client socket (bind-to-address and client port) for VCP Video Wall, Global Maps application, and the ADPRO Media Server. This provides the ability to better finetune these applications to the needs of an environment where network communication is more restricted.	NA
iRespond feature removed.	Removed iRespond functionality from setup and menues.	NA
VCP Feedback tool removed.	Removed the VCP feedback tool from setup and menues.	NA
Secure Viewer	Added extra diagnostic logging to the Secure Viewer Extractor post-extract processing.	NA
Separated SQL instance installation.	Installation of the SQL Server instance, that is required for installing the VCP related databases, has been separated from the VCP setup. The VCP setup no longer integrates installation of SQL server into the VCP setup process. The wizard still does provide a link on the prerequisites page, which allows to run the setup for SQL Server 2014 Express with Advanced Services. SQL Server setup then runs with default configuration settings.	VCP Installation Manual

Feature	Description	Section Reference
Simplified Bounding-Box Configuration	To avoid confusion with the colour of bounding boxes, colour configuration for quad alarm bounding has been removed.	2.12.13.1 Alarm Images
Site Overview	The Site Armed/Disarmed status on the Site Overview page is now updated on the fly, upon receiving a “SYSTEM ARMED” event from the unit. Prerequisite for this to work properly, is to use an alarm profile where the “End of alarm tx” checkbox is ticked, on the unit. If required, the “SYSTEM ARMED” event can be hidden from the ASL, using Sensor Monitoring.	VCP Operational Manual 2.2.1
Windows 10 64 bit, Windows Server 2012 Windows Server 2016 operating systems	VCP can run user interfaces and servers on these operating systems.	NA
Updated default database - SQL Server 2014 Express	VCP setup now comes with SQL Server 2014 Express with Advanced Services. On the setup wizard’s prerequisites page, the setup provides the ability to install SQL Server 2014 Express with Advanced Services, if the user did not select a valid existing SQL Server instance. **Note**: VCP is qualified up to SQL Server 2016 Express.	VCP Installation Manual
Video Wall network configuration	VCP Video Wall can now be configured not to require a ping reply from VCP Server before it attempts to connect to the Server. By default, the Video Wall does not connect to the Server if it doesn’t receive a ping reply.	VCP Video Wall Manual 9.2
New in 3.06		
P2P support	The option to enable P2P instead of the IP connection. The IP Address and Host Name fields disappear if this option is selected and P2P License ID field appears. Enter the license key with 20 alphanumeric characters.	NA
Support for secure streaming	Select this checkbox to enable encrypted video streaming.	NA
Upgrade to SQL Server 2019	VCP installs SQL Server 2019 Express and SQL Report Server 2019 Express (SQL Server Reporting Services-SSRS) for 64-bit operating systems (if there is no previous SQL Server installation). Install the Reporting Server only after installing the SQL Server. There is no change in the installation procedure for 32-bit operating systems, and VCP will install SQL Server 2014 in this case (for backward compatibility).	NA

Note: wherever **ADPRO device** or **ADPRO XO device** is mentioned in this document, it applies to both the FastTrace 2 Series and iFT Series devices, unless specifically mentioned otherwise.

2 Purpose

This manual explains the installation, configuration, and operation of Video Central Platinum Video Wall (VCP VW).

3 Prerequisites

Video Central Platinum (VCP) must be installed onto a dedicated PC.

Other software components may be required on a PC before installation. System prompts may alert the installer and provide guidance in the process of obtaining and installing them.

Note: Some or all of these programs/drivers could already be installed depending on the Operating System Edition in use and the state of Windows Updates:

- Installation and setup of Video Central Platinum
- Installation of Microsoft .NET Framework 3.5 SP1
- Installation of Microsoft .NET Framework 4.0 (default installed on Win 7, Win 10)
- Video Central Platinum Video Wall Installation must be performed with Administrator privileges
- Video Central Platinum Video Wall requires Windows User Accounts with User Name and Password to operate on either Workgroup or Domain Networks.

Note: Video Wall functionality is not available with Video Central Lite.

During operational mode, Video Central Platinum PC operators must have a minimum access level of Power Users. A network card must be installed and in a full operational state. The card must not be in the power saving mode and hence turned off.

It is recommended a Windows Restore Point be set before commencing the installation.

4 HeiTel Support

Support for HeiTel transmitters/recorders has been added to Video Central Platinum. This manual was originally written for Video Central Platinum operation with FastTrace 2. However, the operation has been kept as practically similar between the two transmitter types as possible. Therefore, this manual has not been updated to detail minor differences.

5 Specifications

The PC on which the Video Central Platinum Video Wall (VCP VW) software is to be installed must meet minimum specifications, which are described below.

Once it has been installed, the Video Central Platinum Video Wall system will provide a level of functionality which is described below as the system specifications.

5.1 PC Specifications

- Windows 10 64 Bit, Windows Server 2012 64 bit, Windows Server 2016 64 bit.
- 2.6 GHz Quad-Core Processor or better (Suitable: Q9400, Better: i5-4670, Best: i7-4820K).
- 4GB RAM (minimum), 8GB (recommended)
- Discrete 512MB Video Card NVidia Series 9 or better with 1280x720 minimum resolution.
- 2TB, 7,200 rpm Hard Drive.
- 1000BaseT Network Card.
- 1000Base T Network Backbone.

5.2 System Specifications

- The system supports up to 4 Video Wall application servers.
- Each Video Wall application server can have up to 4 monitors, with a maximum of 20 video streams per monitor, for a total of up to 80 video streams per application server.
- Up to 320 video streams are supported system wide.
- For FastScan transmitters only, one camera per site can be loaded and viewed on the Video Wall. If ADPRO XO FastTrace transmitters are used, Video Wall has the ability to display up to the maximum number of cameras on the site.
- Limit of 10 simultaneous HeiTel connections.

5.3 System Configuration

- All PC's in the system must be running the same version of Video Central Platinum (VCP).
- Up to four Video Wall application server PCs can be configured within a VCP Video Wall System for a maximum of 320 possible cameras, supporting ADPRO XO, HeiTel, and legacy transmitters.
- Each Video Wall PC should be separate and not a User Interface or Server/Database PC.

5.3.1 Video Wall User Permissions

In normal operation the Video Wall button  is enabled in the Controls panel. If the Video Wall button is disabled ('greyed out')  when you log in to Video Central Platinum you should see your system administrator, who will make sure that you have the appropriate permissions for Video Wall. The "Video Central Platinum Setup and Configuration Manual" describes how to add users to a group (Adding and Editing Users) and assign permissions to a group (Adding New Groups).

5.4 Firewall Requirements

The Video Wall client communicates with the Video Central modules: MD.exe, UI.exe, SPM.exe, ADPROMEDIASERVER.exe and Video Central Platinum Server. This communication must be allowed by the firewall client on a Video Wall application server PC. Also, Video Wall uses 'ping' (ICMP) commands to communicate. Many firewalls and virus programs block ICMP commands. To overcome this issue, use the firewall or virus interface to grant access to these modules and to the ICMP Protocol.

Direct access to ADPRO XO and HeiTel transmitters is also required.

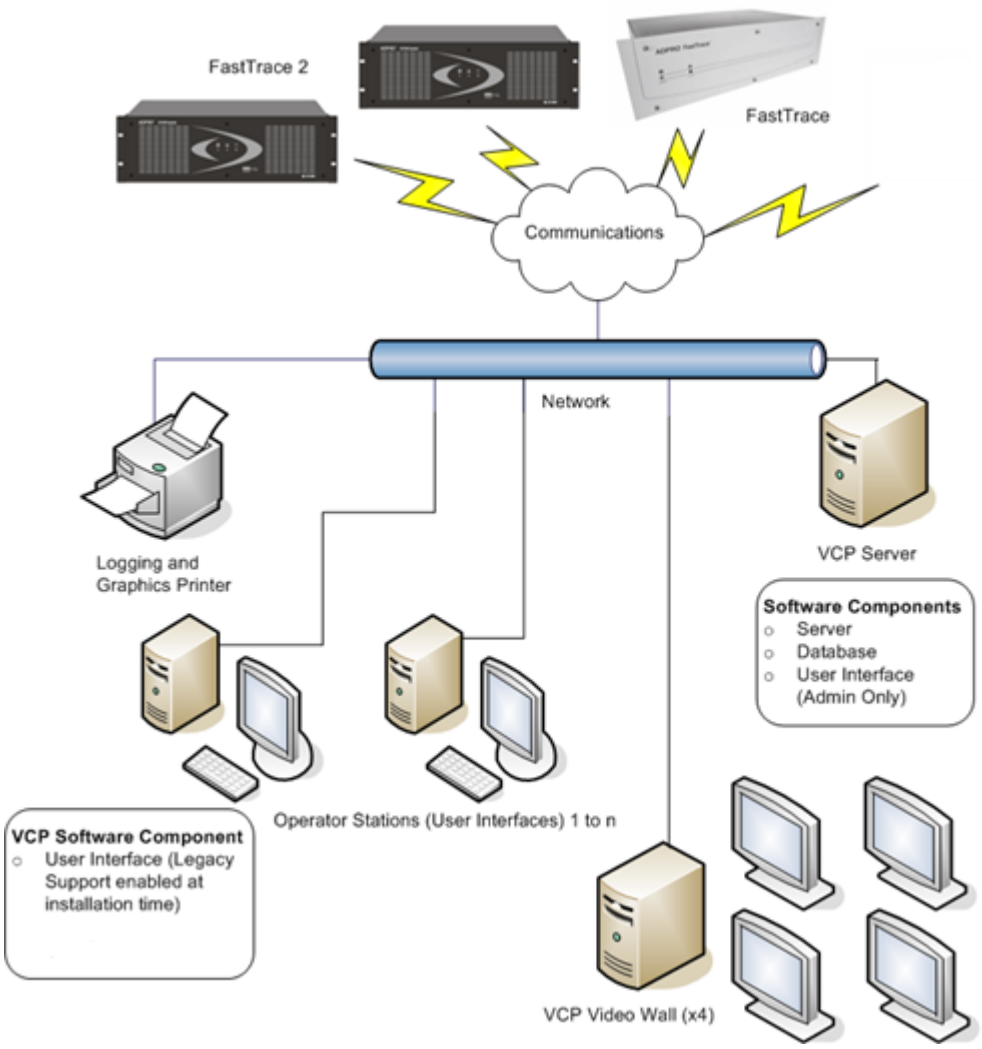
5.4.1 Video Central Platinum Specific Firewall Requirements

Video Central Platinum requires that Port 4175 TCP to be 'open' in any router or software firewall. Opening of this port is best achieved by allowing the virus scan software to accept Video Central when prompted to do so.

6 System Overview

Video Central Platinum Video Wall receives video streams from ADPRO XO, HeiTel, and Legacy sites (FastTrace, FastVu, FastScan), displaying them on the configured Video Wall monitors. The Video Wall can be set up to operate in a static configuration, where the sites and cameras are associated and fixed, or changed organically as required. The Video Wall feature provides an effective surveillance tool.

The illustration below shows a system with ADPRO FastTrace 2 Series devices. ADPRO iFT Series and HeiTel devices are also possible.



7 Video Central Platinum Video Wall Installation

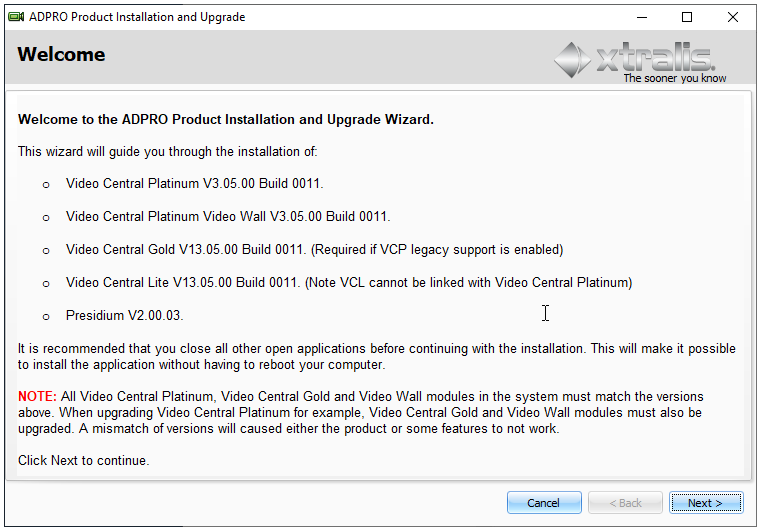
Important: Install and uninstall Video Central Platinum Video Wall (VCP VW) only as specified in this manual, using the Video Central Platinum Video Wall Installer or Windows Control Panel.

Before installation can be commenced the following preparations must be made:

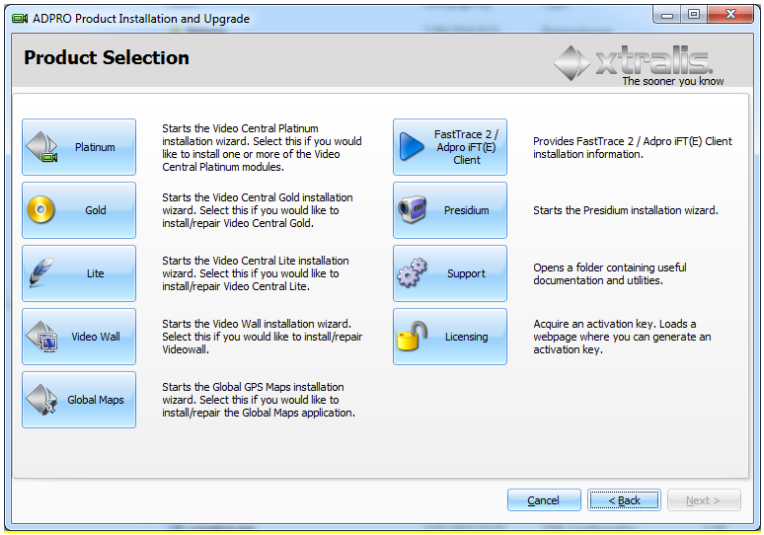
- Ensure the Video Central Platinum Video Wall installation package is available locally on the PC, either on the local hard drive or DVD ROM.
- Close all running applications including **Antivirus Software**. Some antivirus software can stop Video Central Platinum Video Wall from installing correctly.

After the pre-installation checks have been completed you are ready to install the Video Central Platinum Video Wall software on the Video Wall PC:

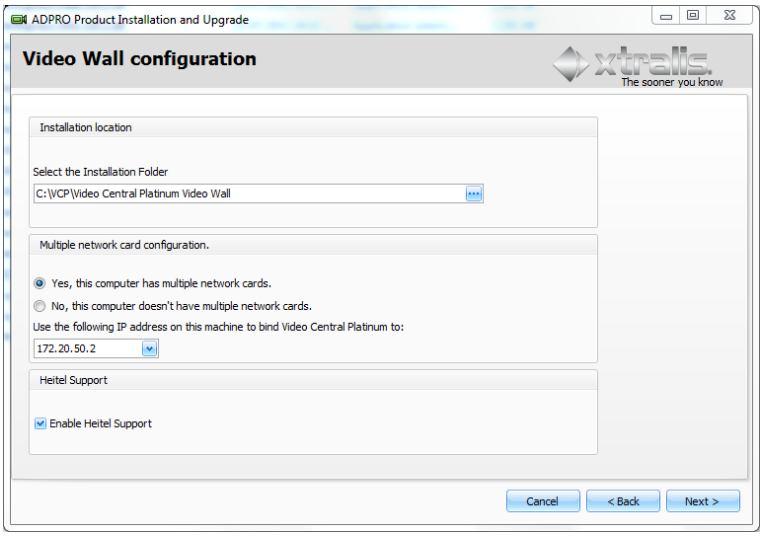
1. Insert the supplied DVD, which will automatically begin loading unless Auto run is not active. In that case run the setup procedure by double clicking on the file VCPInstaller.exe in the root directory of the supplied media. The Welcome screen will be displayed. Ensure all other applications are closed before starting the installation process. Click **Next** and the Product Selection screen will be displayed.



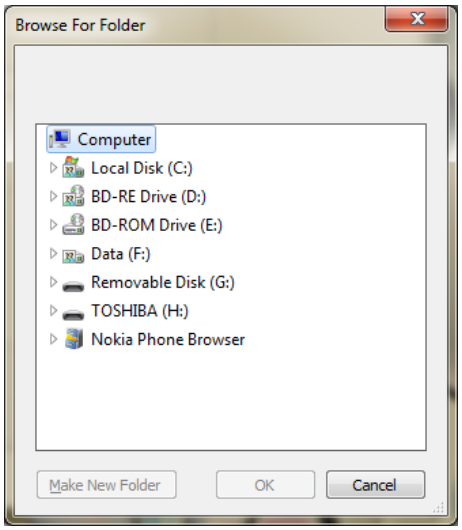
2. Select **Video Wall** and the Video Central Platinum Video Wall Configuration screen will be displayed.



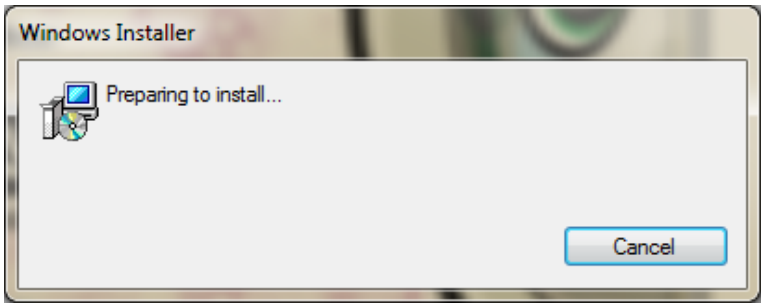
3. In the Video Wall Configuration screen there are two options for Network Binding:
   - If the computer does have multiple network cards, select **'Yes', this computer has multiple network cards'** and then select the IP address on which the Video Central Platinum Server can be accessed from the drop down list below.
   - If the computer does not have multiple network cards, select **'No, this computer doesn't have multiple network cards'**.
4. Select the desired installation folder for Video Central Platinum Video Wall.
5. In the Multiple Network Cards Configuration screen there are two options:
   - If the computer does have multiple network cards, select **'Yes, this computer has multiple network cards'** and then select the IP address on which the Video Central Platinum Server can be accessed from the drop down list below.
   - If the computer does not have multiple network cards but you may wish to expand to a multiuser CMS at a later time, select **'No, this computer doesn't have multiple network cards'**.
6. If HeiTel transmitters are required on the Video Wall select the '**Enable HeiTel Support**' checkbox.
7. Click **Next** to Start the Installation process.



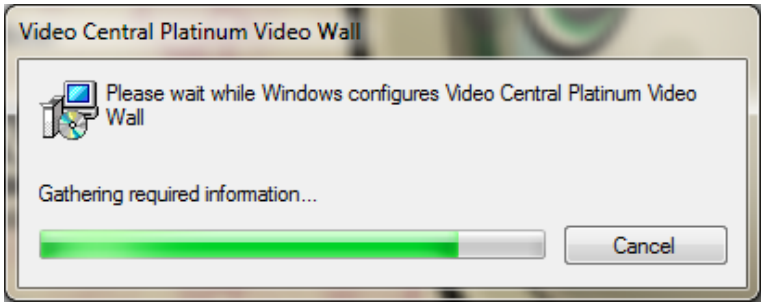
8. On the Installation Folder entry box the **Browse Icon** can be selected to locate a suitable hard drive for the installation.



9. The Installation process begins.



10. In the Installing Video Central Platinum Video Wall screen the progress bar will move across the screen as the installation proceeds.



11. Select **OK** to complete the installation.

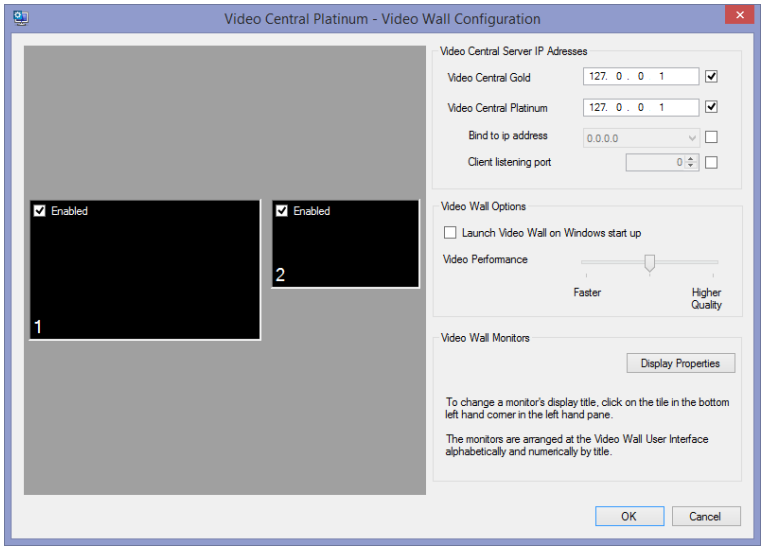


12. Repeat the process for each of the Video Central Platinum Video Wall application servers.

8 Video Wall Configuration

After you have installed the Video Central Platinum Video Wall, the Video Central Platinum – Video Wall Configuration shortcut will be available on your desktop and under the normal Programs menu for your version of the Windows operating system as *Xtralis* > *Video Central Platinum*.

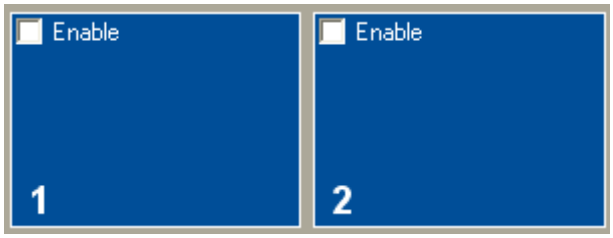
1. Double-click on the Video Central Platinum – Video Wall Configuration shortcut on your desktop to open the configuration screen.



2. Enable the Video Wall Monitors.

   If they have not yet been enabled on the Video Wall PC, the monitors can be enabled and their display label set:

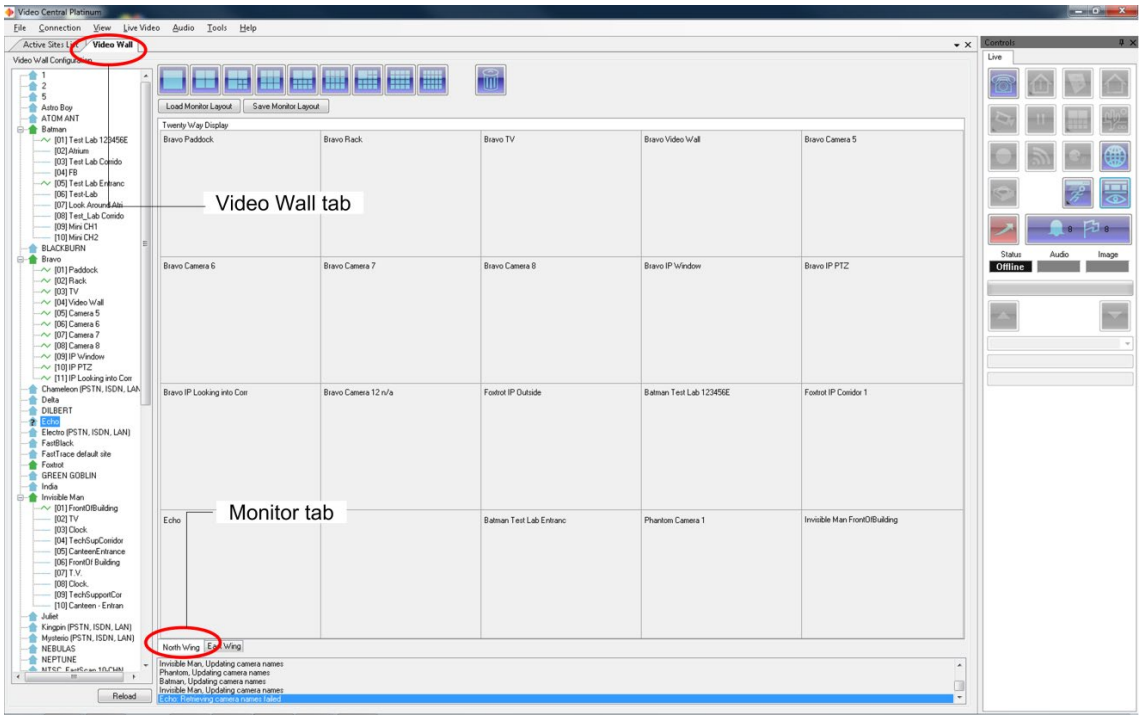
   Before the monitors have been enabled the Enable check boxes are clear and the monitor name defaults are displayed at the bottom left for each monitor:



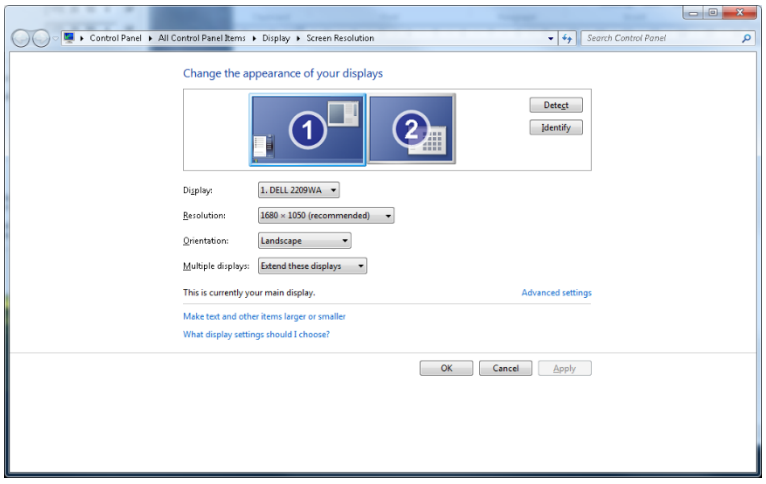
   Click in the enable check box to enable a monitor and select its present label with the cursor to enter its new label.



When you view the Video Wall PC within the Video Central Platinum User Interface the monitor name will be displayed in the **Video Wall** tab.



3. In the Video Central Platinum Video Wall Configuration screen click on the **Display Properties** button to set the screen resolution for the selected monitor.



Repeat this process for each of the available monitors.

4. Set the Video Wall Server IP Addresses:

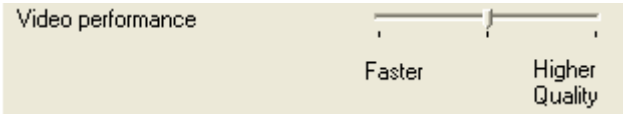
   Enter the IP address for the Video Central Platinum server and set that option with the Video Central Platinum checkbox.

   Note: No additional setup is required for HeiTel transmitters as connections are performed through the CamControl Server installed onto the Video Wall PC.

5. Set the Video Wall Options:

   You may alter the Launch Video Wall on Windows start up setting, as desired. Enabling this feature ensures that the video wall application automatically starts when the PC is started. Note that the Video Wall will need to be configured, typically by loading a saved configuration.

6. Set the Video Performance:



Moving the slider towards **Faster** reduces the image resolution and quality so that the image will update more quickly. There are alternatives that may not reduce the image quality:

- Reduce the number of cameos (camera images) shown on one monitor to increase the responsiveness of the display.
- Display one cameo only on a monitor to display the feed from a high-quality camera, optimising the image quality and responsiveness for that camera.
- Fit a faster video card, or a video card with more dedicated video memory, to increase the camera image responsiveness, while maintaining its image quality and displaying a higher number of cameos per monitor.

8.1 Video Performance

The Video Performance option sets the maximum video quality for Video Wall cameos appropriate to the available network bandwidth.

Video Wall can display a range of video resolutions in each cameo, depending on the quality level set for the camera a cameo is displaying and the result of several rules that are applied to manage the video quality for each cameo.

The available video resolutions are: QCIF (176 x 144 pixels), CIF (352 x 288 pixels), 2CIF (704 x 288 pixels), and 4CIF (704 x 576 pixels).

Video Performance is set with the Video Performance slider just before an operation is finished in the Guard Tour Wizard. The Video Performance slider has three settings: ‘Faster’, a middle setting and ‘Higher Quality’.

Faster: This setting requires the least network bandwidth to display the video in its cameo. The maximum video resolution at this setting will be QCIF (176 x 144 pixels). This setting is advised for installations where a slower connection to the VCP Server via the network is available (slower ADSL).

Middle setting: This setting requires more network bandwidth to display the video in its cameo than the ‘Faster’ setting but displays better quality video than the ‘Faster’ setting does. The maximum video resolution at this setting will be CIF (352 x 288 pixels). This setting is advised for installations where the connection to the VCP Server via the network uses ADSL.

Higher Quality: The highest quality setting requires the most network bandwidth to display video on its cameo but allows cameos to display up to 4CIF (704 x 576 pixels). This setting is advised for installations where the connection to the VCP Server is via a network LAN (Local Area Network).

While moving the slider towards **Faster** will update video more quickly by reducing its resolution and quality, there are alternative methods you can use to display video more quickly without reducing the video quality:

- Reduce the number of cameos (camera images) shown on one monitor to increase the responsiveness of the display.
- Display one cameo only on a monitor to display the feed from a high-quality camera, optimising the image quality and responsiveness for that camera.
- Fit a faster video card, or a video card with more dedicated video memory, to increase the camera image responsiveness, while maintaining its image quality and displaying a higher number of cameos per monitor.

8.1.1 Protection Mode

Protection Mode displays video in I-Frame mode, where it updates the video once every 4 seconds, when it needs to protect Video Wall from overloading the system by displaying video at too high a resolution.[1]

Video Central Platinum uses a series of rules to manage the video quality for each cameo displaying video from a camera, regardless of the site the camera is associated with.

Rule 1 protects the CPU from being overloaded. The quality of the images displayed in Video Wall cameos are determined by an algorithm that calculates whether an image resolution, for example 4CIF, can actually fit within the cameo, based upon the video card resolution settings and the dimensions of the cameo in play. If it can fit then the respective resolution will be displayed. If the image resolution does not fit then the algorithm will display the largest available image resolution that can fit.

[1] The available image resolutions are: 4CIF(704 x 576 pixels), 2CIF(702 x 288 pixels), CIF(352 x 288 pixels) and QCIF(176 x 144 pixels).

Rule 2 protects the Network connection from being overloaded. The slider in the VW setup determines the max quality that can be displayed to be either 4CIF, CIF or QCIF. This is required for cases where insufficient communications bandwidth is available.

Rule 3 uses a feature of ADPRO XO to protect the CPU from being overloaded. When a user connects to the ADPRO XO device and takes control of the ADPRO XO video stream, by connecting to the camera from the VCP User Interface as an example, they may set a higher quality that can fit into the Video Wall cameo. In this case protection mode is entered. In Protection Mode the resolution the user requested is maintained, however the picture update rate drops to I-Frame mode where it updates the video once every 4 seconds and a shield icon is displayed in the top right hand side of the cameo. Once the user drops control of the camera, by disconnecting from the camera in the VCP User Interface for this example, Video Wall will take control again and drop out of protection mode.

Note: Protection mode maybe entered permanently for IP Cameras if the lowest resolution the camera can be provided is higher than the maximum video wall quality set during setup.



8.1.2 Picture Qualities Behaviour

Once Video Central Platinum connects to a site via the Video Central Platinum User Interface and as each camera is selected the respective Video Central Platinum User Interface default quality level will be set. The user may change the quality level manually between Quality 1 and 8 as and such the Video Central Platinum User Interface and Video Wall picture quality level will change respectively. As the Video Central Platinum User disconnects from the Video Wall the Video Wall automated quality levels shall be used.

Note: If Qualities 7 or 8 are selected all other cameras may be limited to QCIF.

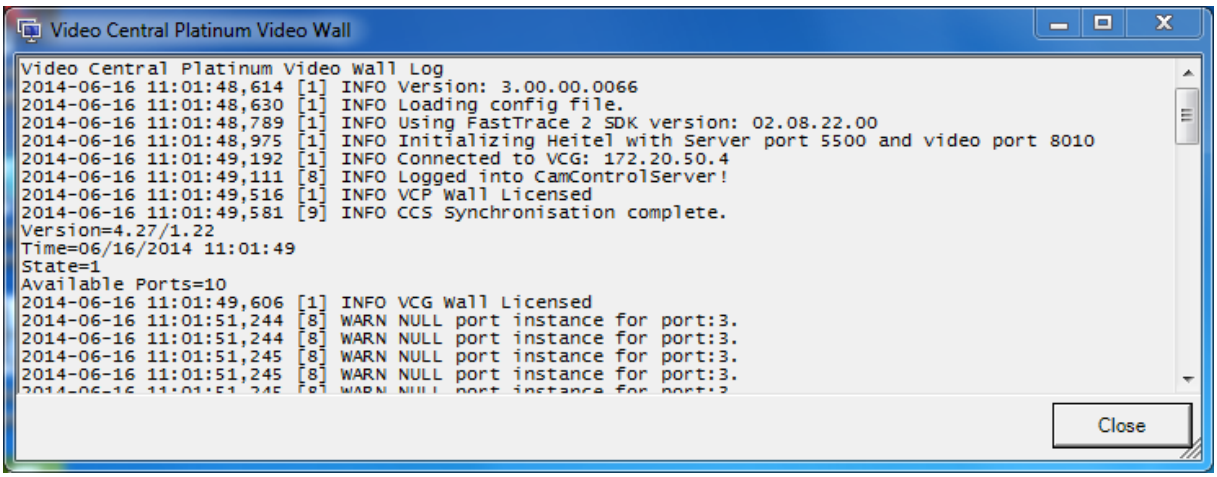
8.1.3 Starting Video Wall

Ensure that the Video Central Platinum is running.

On each Video Wall PC double-click on the Video Central Platinum Video Wall Client shortcut. 

When the Video Wall application starts up the monitors associated with the Video Wall will go black and are ready for configuring via the Video Wall Controller, which is part of the Video Central Platinum User Interface.

We use the ESC key on the keyboard to close the Video Wall application because the application is usually hidden behind the video display.



Each monitor on the Video Wall PC displays the cameras it was configured with in the Video Central Platinum User Interface.

If the Video Wall application is closed or minimized the displays associated with Video Wall are closed or minimized respectively on each Video Wall monitor.

8.2 Advanced Video Quality Configuration

By default the Video Wall will automatically determine the quality settings to apply for the cameos on its video grid. This default behaviour can be overruled by manually configuring quality settings in the Video Wall's configuration file.

Path to the configuration file:
%ALLUSERSPROFILE%\ADPRO VCP\ADPROSW.config

Quality Settings Overruling

This configuration file has a [Quality Settings Overruling] section. This section has two settings: MANUAL and BOOST.

MANUAL is either 0 or 1. Default is 0.

- MANUAL=0: Video Wall will automatically determine the quality settings. For determining the quality settings it takes into account the MODIFIER setting under the [QUALITY LEVELS] section.
  The Video Wall will try to calculate appropriate qualities based on the size of the cameos on the screen.
- MANUAL=1: The Video Wall will use the quality levels as specified by the SPLIT_x settings under the [QUALITY LEVELS] section.
  Note: this setting overrules Video Wall's built-in protection to guard against overloading. Overloading the Video Wall may result in running out of memory and decreased performance.

The BOOST setting has two possible values 0 and 1. When set to 1 it enables the Video Wall to use quality 8, which is otherwise not available to use on the Video Wall, i.e. then the maximum quality is capped at quality 7.

Quality Levels

The [QUALITY LEVELS] section has a MODIFIER setting, and a number of SPLIT_x settings.

The SPLIT_x settings will be used only if MANUAL = 1.

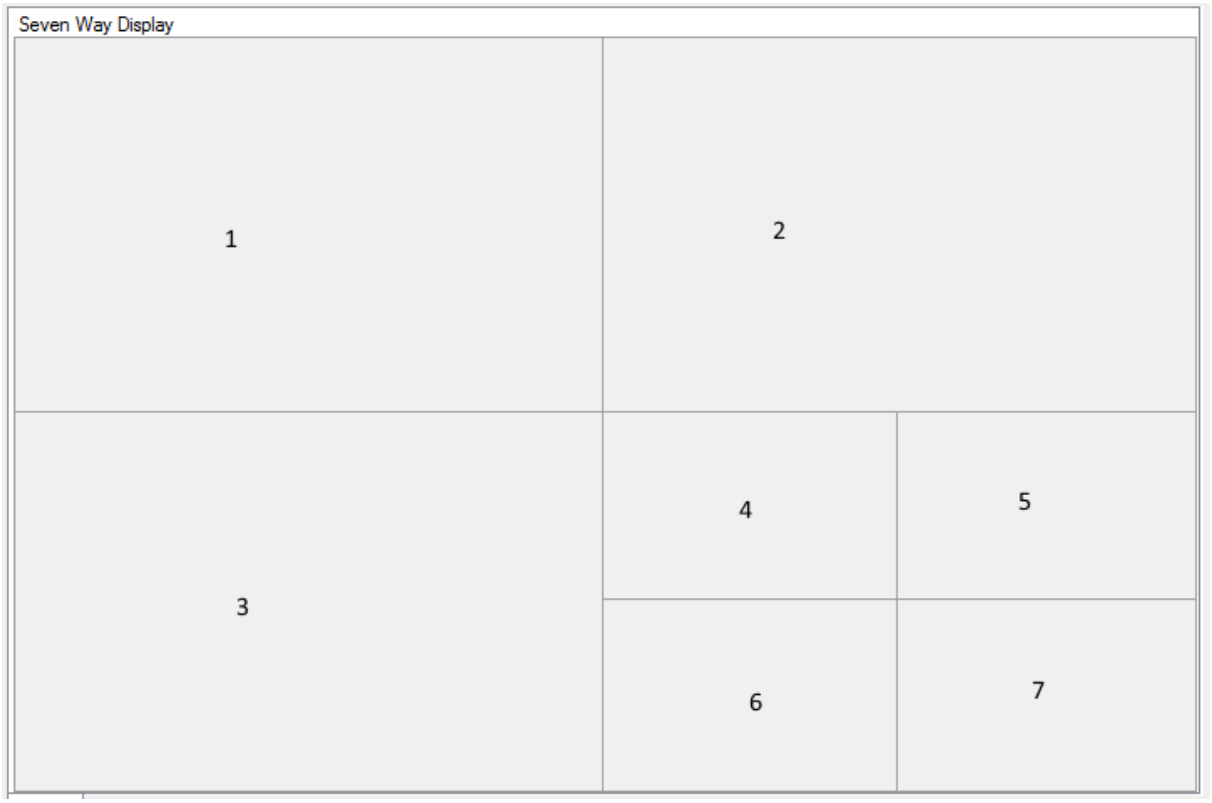
Available SPLIT_x settings are SPLIT_1, SPLIT_4, SPLIT_7, SPLIT_9, SPLIT_10, SPLIT_12, SPLIT_13, SPLIT_16, and SPLIT_20.

SPLIT_1 specifies the quality level to be used for a 1-split view (i.e. a view with a single cameo). SPLIT_4 specifies the quality levels to be used for the cameos on a 4-split view, and so on.

Assignment of quality levels works as follows:

There are in total 8 quality levels, ranging from 1 – 8, where 1 is the lowest quality and 8 the highest.

Consider a 7-split view. A 7-split view has 7 cameos. Each cameo on the split has an index assigned in a specific order. An incrementing index is assigned to each camera, starting from index value 1. The index assignment starts from the top left cameo to bottom right, from left to right, as shown by the image below.



To assign the quality to each of these cameos, the 7-split view SPLIT_7 setting has to be used. For example if you wanted to assign quality 5 to the first 3 cameos (index 1 – 3) and quality 3 to the last 4 cameos (index 4 – 5), you could use following setting:
SPLIT_7=5,5,5,3,3,3,3

Here the first value (5) applies to the cameo with index 1, the second value (5) applies to the cameo with index 2, etc.

The same configuration could be made by using the following setting:
SPLIT_7=5,5,5,3.

The last value (3 in this case) will be used for the remaining cameos (index 5, 6 and 7 in this case) for which a value is not specified. Note, you could not use SPLIT_7=5,3 to accomplish the same, as this means cameo 1 would be assigned quality 5 and cameo 2-7 would be assigned quality 3.

The MODIFIER setting can be either -1, 0 or 1. The effect of this setting depends on the value of the MANUAL setting.

- In case MANUAL=0
  - If MODIFIER=-1 then only Q2 (quality 2) will be used for all cameos.
  - if MODIFIER=0 then Q1 to Q4 can be selected to use for a cameo.
  - If MODIFIER=1 then Q1 to Q7 can be selected to use for a cameo.
  - If BOOST=1 then also Q8 can be selected.
- In case MANUAL=1
  The Video Wall will use the quality settings from the [QUALITY LEVELS] section, as specified by the SPLIT_x settings.
  The actual quality that the video wall will attempt to use for a cameo is the sum of the related value specified by the SPLIT_x setting and the value of the MODIFIER setting.
  E.g. if
  SPLIT_7=5,5,5,3
  MODIFIER=-1
  Then for a 7-split view, cameo 1-3 will use quality 4. For cameo 4-7 quality 2 will be used.
  Note: if BOOST=1 then also Q8 can be used.

Example

Below is an example of the content of a Video Wall configuration file.
Note: only the [QUALITY LEVELS] and [Quality Settings Overruling] sections are discussed here.

```
[QUALITY LEVELS]
MODIFIER=-1
SPLIT_1=6
SPLIT_4=5
SPLIT_7=5,5,5,3
SPLIT_9=4
SPLIT_10=5,5,3
SPLIT_12=4
SPLIT_13=5,3
SPLIT_16=3
SPLIT_20=2

[MONITORS]
MONITOR 1=\\.\DISPLAY1,1,0
MONITOR 2=\\.\DISPLAY2,2,1

[GENERAL]
IPGOLD0=127,0,0,1
IPPLATINUM0=10.0.0.11
PINGSERVER=
STARTUP=0
RECONNECT_TIME=0
CUSTOM_LOGO=

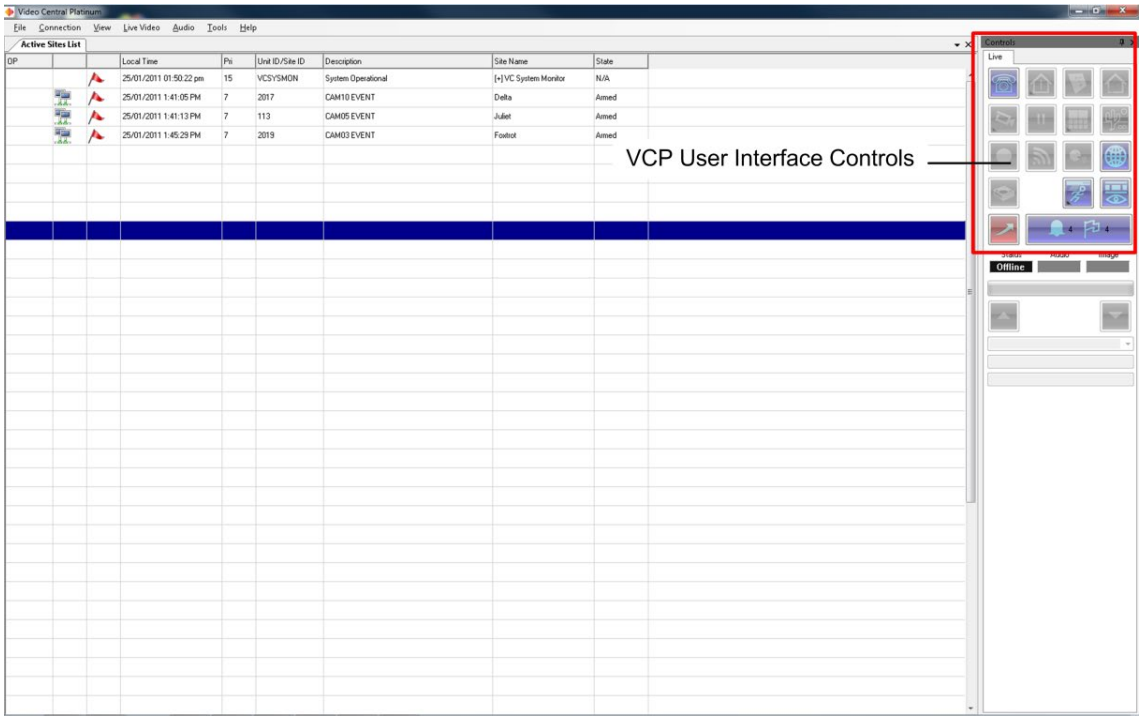

[BindToIP]
BindToIP=10.0.1.43

[Quality Settings Overruling]
MANUAL=0
BOOST=0

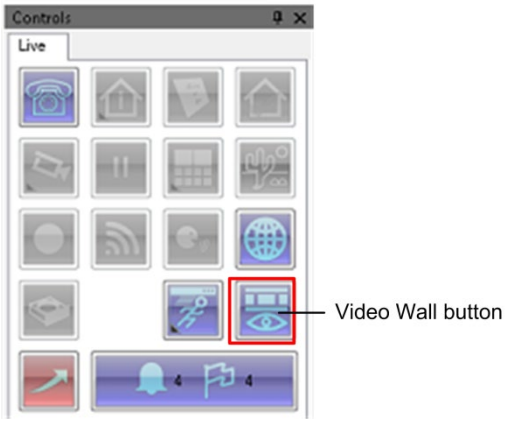
[Heitel]
ENABLED=True
```

9 Operation

Video Wall is controlled from the Video Central Platinum Video Wall Control Interface. From here the ADPRO XO, HeiTel, and legacy (FastTrace, FastVu, FastScan) sites are controlled. To enable the Video Wall Control follow the procedure described below.



The **Controls** panel is on the top right of the Video Central Platinum User Interface (VCP UI).



Click on the **Video Wall**  button to open the **Video Wall tab**.

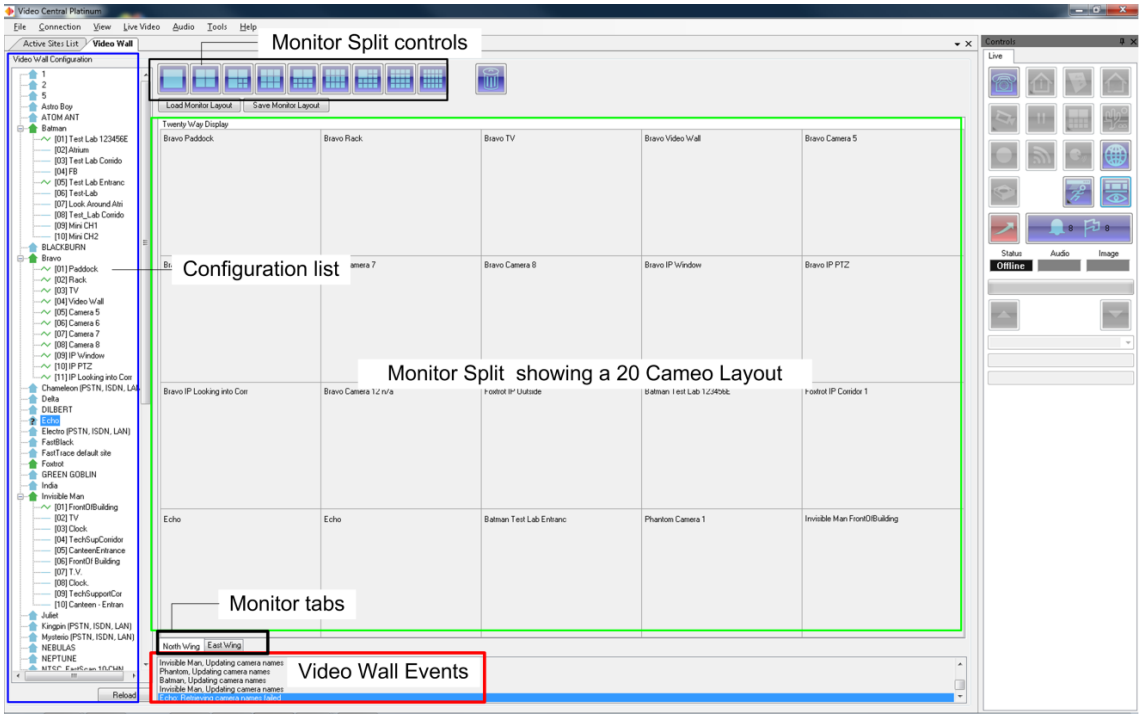
9.1 Video Wall Tab

The **Video Wall** control opens the Video Wall tab, which is used to configure the Video Wall (VW) monitor splits and the camera assigned to each cameo.

The **Video Wall** tab contains:

- the **Monitor Split,** which controls the layout, setting the available video splits in the layout below and ultimately on the Video Wall,
- the Video Wall **Configuration** list, showing all the sites for this Video Central system, their cameras, and states,
- the **Monitor** tabs, which allows you to select the monitor for which you want to access the monitor split and cameo layout, and

- the Video Wall **Events** list, typically used for fault finding.



9.2 Status

The Icon for each site will be blue until the Video Central Platinum User Interface is connected to it and one or more of its cameras are displayed on the Video Wall.

Blue Site = site details have not been retrieved yet

Blue Site + ? = Video Central Platinum User Interface is collecting the camera details from Video Central or connecting to the site

Blue **+** detail = site is connected, no cameras from this site are displayed on the Video Wall

Green **+** detail = site is connected, one or more cameras from this site are displayed on the Video Wall

Each camera's icon will be blue until the Video Central Platinum User Interface connects to its site and the camera is displayed on the Video Wall.

Blue - = the camera is not displayed on the Video Wall

Green ~ = the camera is displayed on the Video Wall

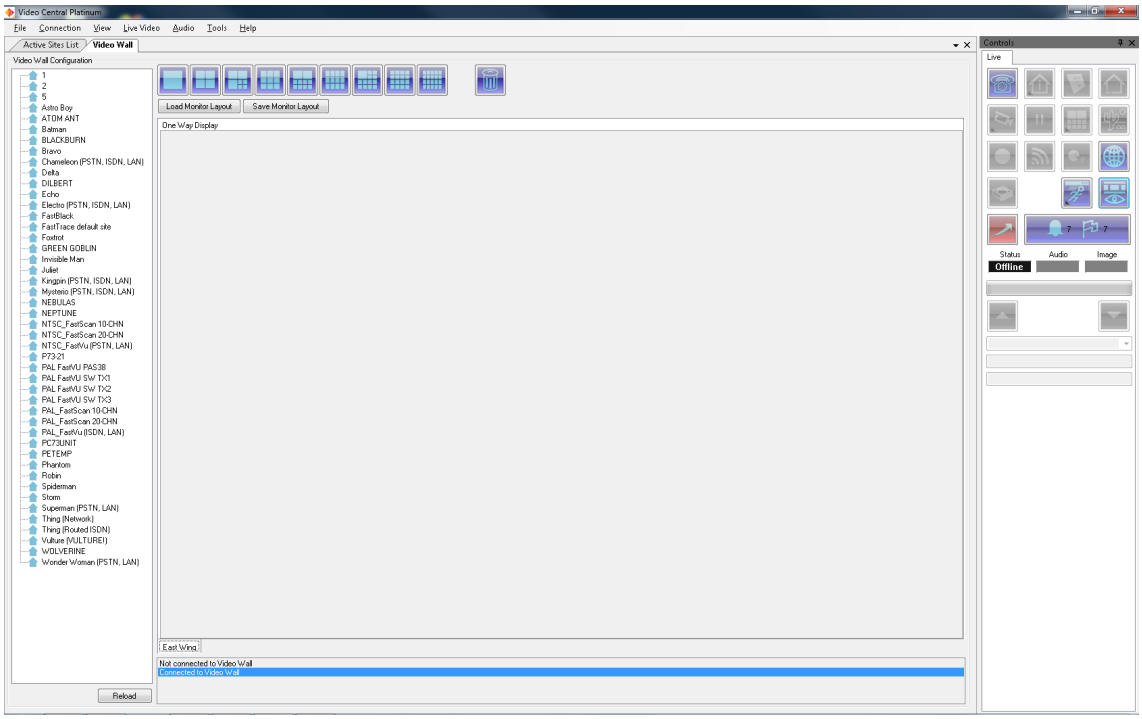
Each camera for a site is identified by its camera number and name.

[02] TV = **camera label** includes: [Camera Number] Camera Name

9.3 Initial state

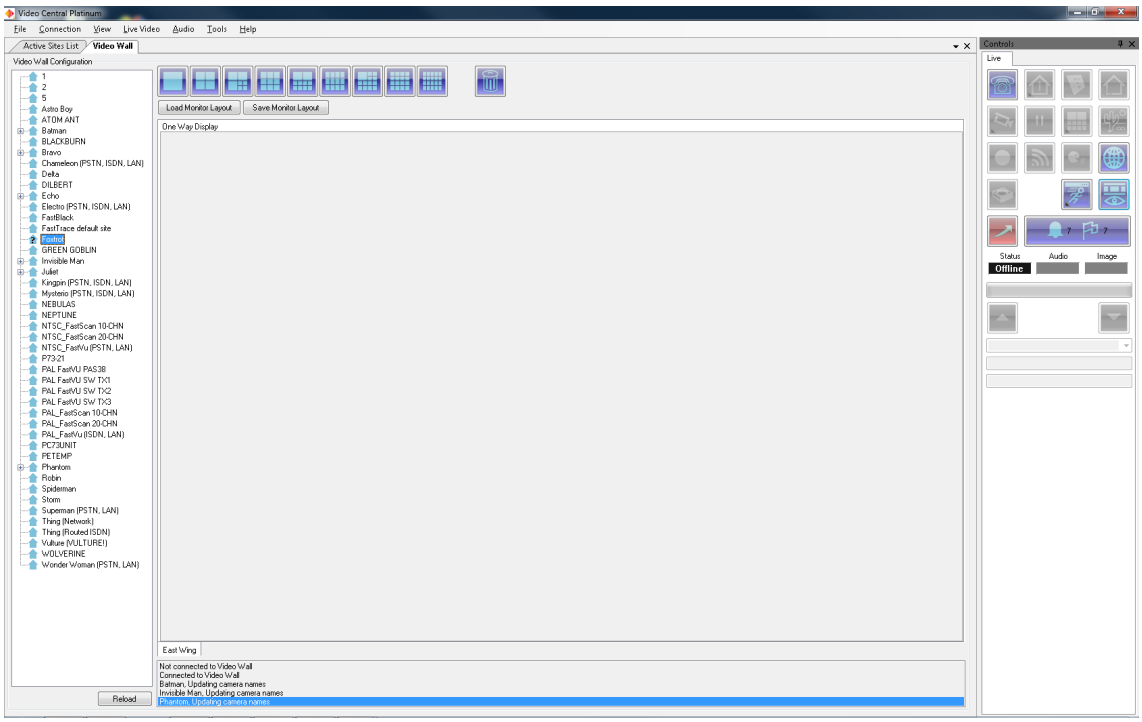
When it is opened for the first time Video Wall has not been configured. In the Video Wall tab the Video Wall Configuration list is displayed on the left with the 'One Way Display' for the first of its associated monitors.

As yet all of the active sites are displaying blue Site icons with no detail because Video Wall has not yet connected to the sites.



9.4 Configuring a Video Wall Monitor

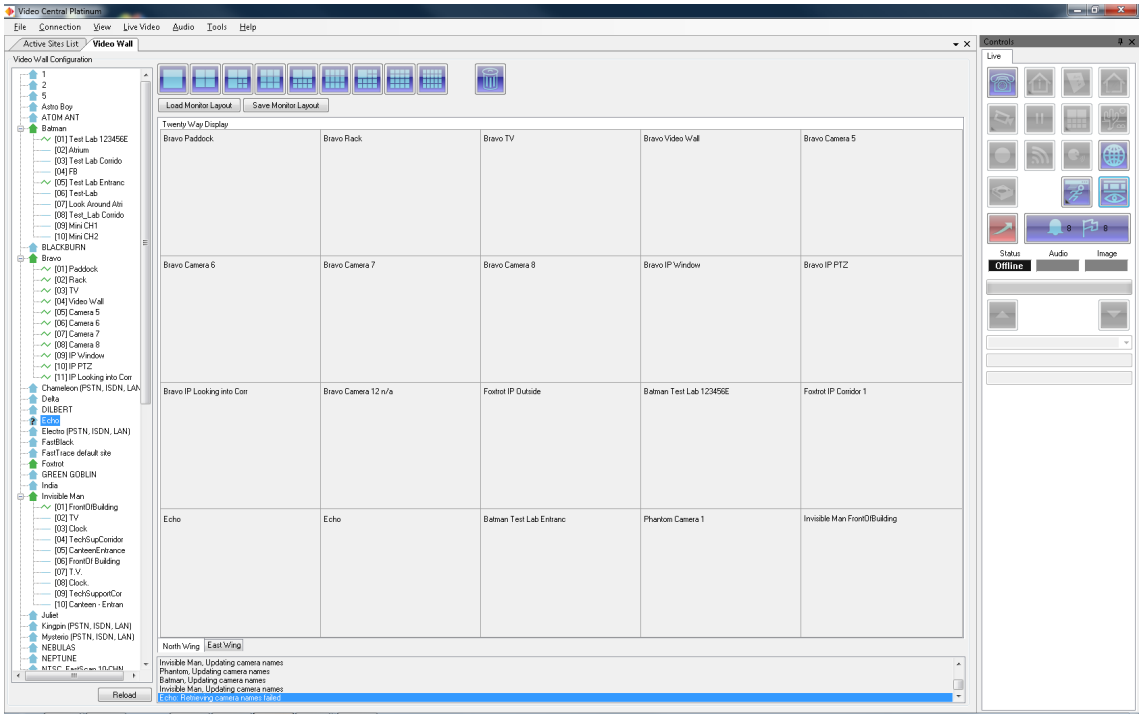
Double-click on a site to connect to it and retrieve its camera detail. The blue **Site** icon for the site will display the **?** symbol while it is connecting to the site and retrieving camera information .



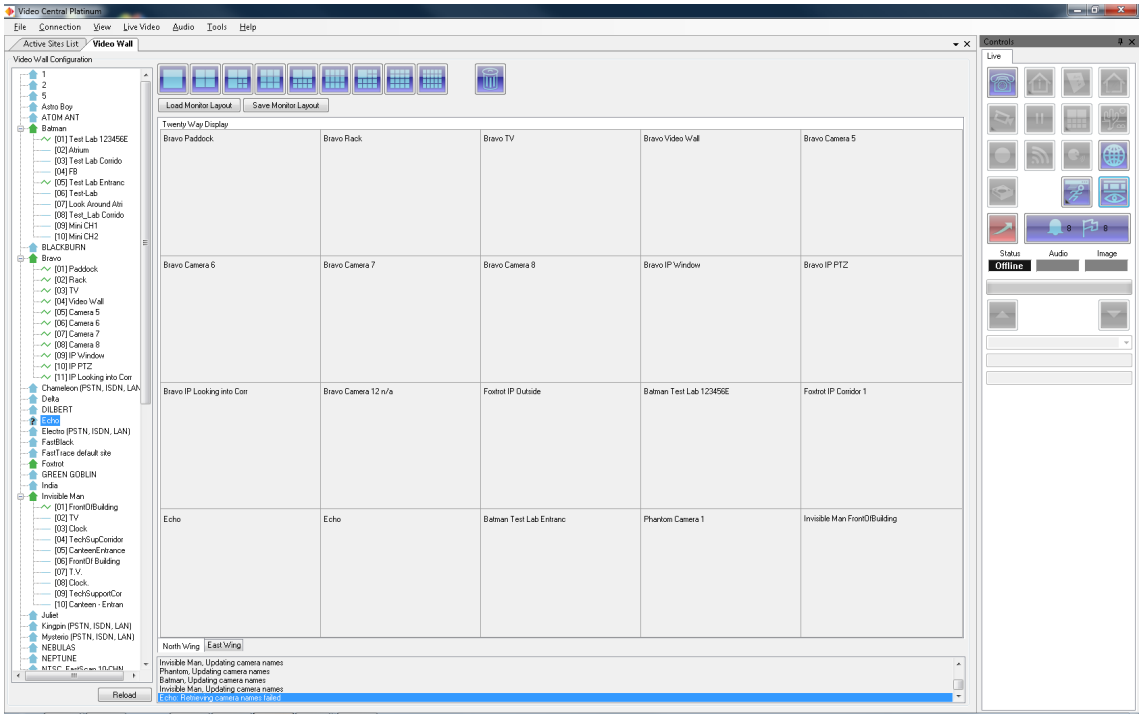
After the camera information for a site has been retrieved the **Site** icon will show that there is detail to view.

Click on the **+** to expand the detail, the list of cameras, for a site.

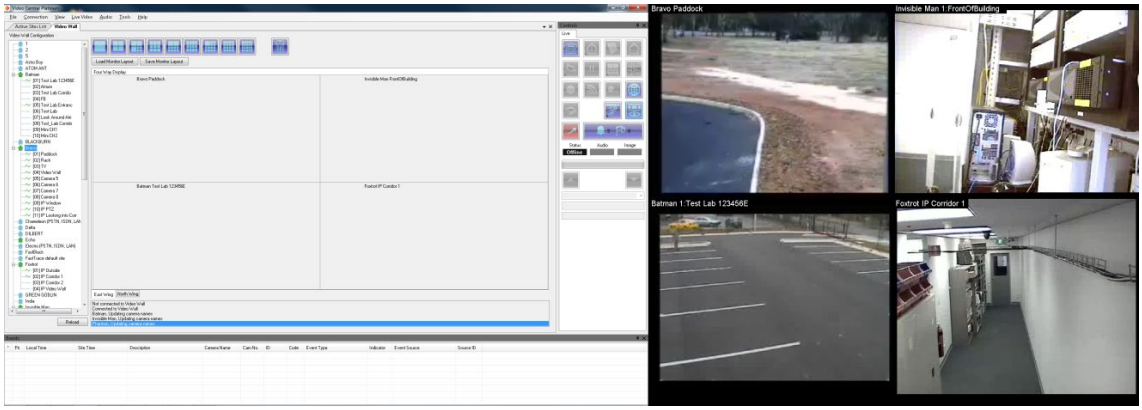
Click on a **Monitor Split** button  to configure the active monitor with the number of cameos and layout you want.



Drag a ‘site’ or one or more cameras to the cameos. After you have dropped a camera into position its camera icon will change to green and the **Site** icon for the site will also change to green .



After you have dropped cameras onto the active monitor, if you are able to see the Video Wall PC, you will notice that the cameras are displayed on the associated monitor in accordance with the monitor split and cameo layout in the Video Central Platinum User Interface Video Wall tab.



Click on the **Save Monitor Layout** button  to save the monitor layout.

Click on another Monitor tab to set its configuration.

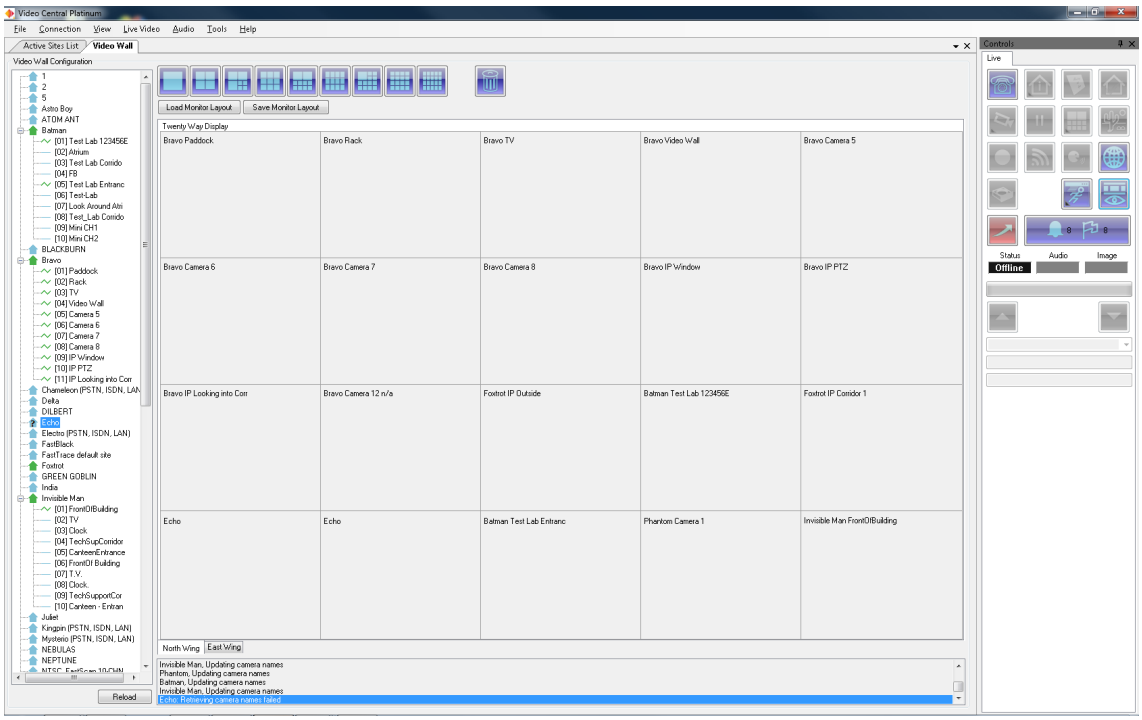
9.5 Connecting to the Site

Within the configuration list, double-click on a site to collect its camera detail from Video Central or connect to the site. While the camera information is being collected from the site its icon is blue and it will display the **?** symbol to indicate its progress .

Once the connection has been made:

- expand the site detail, shown either as or , (by clicking on the **+**) to see its cameras;
- if one or more cameras associated with the site is being displayed on a Video Wall monitor the site icon will be green and the displayed camera(s) will also be green;
- if none of the cameras associated with the site are displayed on a Video Wall monitor the site icon will be blue and the listed camera(s) for that site will be blue.

Important: Video Wall cannot use any backup communications methods as programmed in the Site Details. Only the primary connection method will be used, if a connection cannot be made video will not be displayed on the Video Wall. In this case the Video Central Platinum User Interface should be used as an alternative to view the site.



9.6 Setting Splits

Each monitor associated with a Video Central Platinum Video Wall application server will have its tab displayed at the bottom of the monitor layout. When you click on one of these tabs the monitor's current split and cameo layout are displayed.

Click on one of the **Monitor Split** buttons  to set the cameo layout for a monitor. The buttons provide for splits of 1, 4, 7, 10, 12, 13, 16, and 20 cameos.

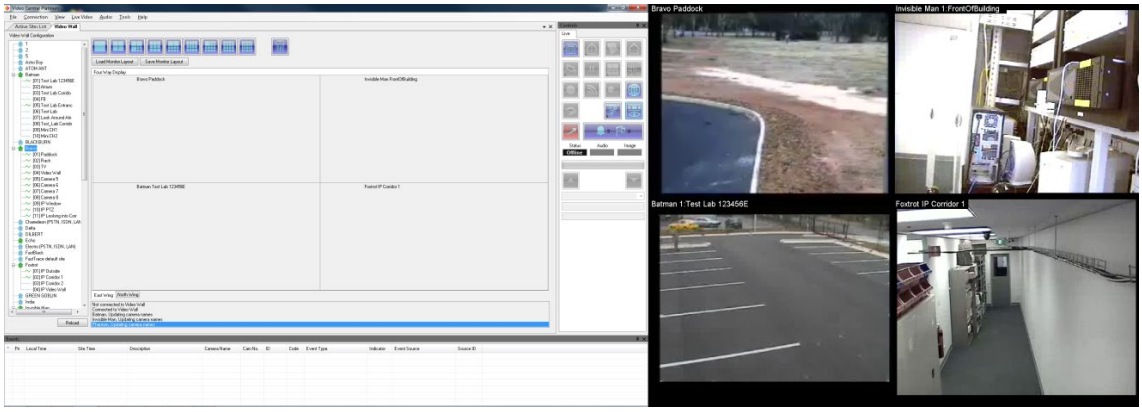


9.7 Populating a Monitor

After setting the monitor split you can populate the cameo positions with cameras by:

- dragging a site to the monitor; its cameras will fill the monitor's remaining cameos from left to right and top to bottom.
- dragging a camera from a site list to a cameo position; the camera will replace the cameo at that position.

The Video Wall monitor will display the cameras with the green camera symbol ~ according to the monitor cameo layout.



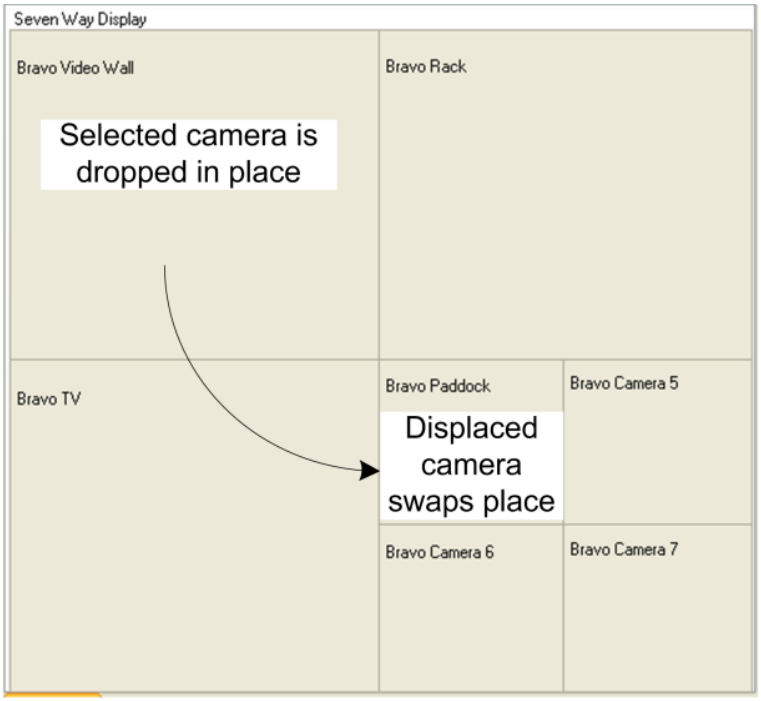
9.7.1 Swapping Camera Positions

To swap the position of two cameras on a monitor:

Drag a camera from a selected position on a monitor to the drop position;



When you drop the selected camera it will swap position with the displaced camera.



9.7.2 Removing a Camera from the Video Wall

Cameras can be dragged to the **Garbage bin**  to remove them from the Video Wall.

9.8 Video Wall Image Status

The image displayed in the cameo on the Video Wall monitor changes colour to indicate changes in a camera's connection to a cameo in the Video Wall application:

ADPRO XO and HeiTel Sites

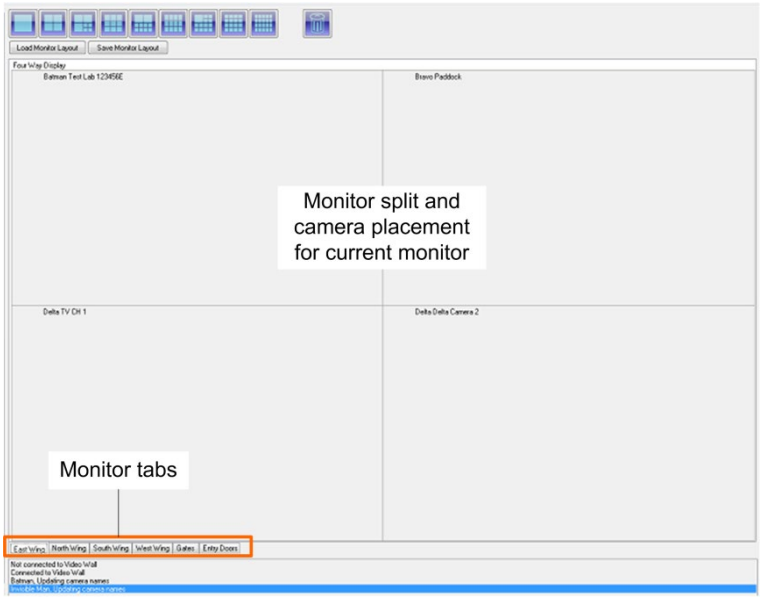
- **Live video** - Cameras connected, normal operation
- **Yellow** - the Video Wall application is connecting to the camera
- **Red** - the camera cannot connect to the Video Wall application, typically due to physical connection issues
- **Black with no video** - Faulty camera, no video state

Legacy Sites

- **Red Border** - While cameras are being accessed by an operator (for example during an alarm), a reduced (size) static cameo is highlighted with a red border and the last frame displayed.
- **Grey/Green Background** - the background colour is displayed while images are being loaded from a site.
- **Red Background** - Unable to retrieve video from site (90 seconds has elapsed)
- **Yellow Background** - Site has been disconnected (9 minutes has elapsed)
- **Blue Background** - Faulty camera, no video state.

9.9 Switching between Monitors

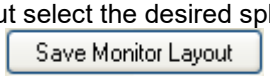
The **Monitor** tabs are located below the monitor layout display.



When you select a **Monitor** tab the monitor's current monitor split and camera placement are displayed above the tab. As the monitor is selected control switches to the respective monitor.

9.10 Saving and Loading Configurations

Monitor split and camera placement can be saved as a monitor configuration for later re-use. The configuration specifies the cameras to display, which can be from any of the available sites, and their placement on the monitor. Saved configurations make it easy to swap from one configuration to another as circumstances change.

To save a monitor layout select the desired split and allocate cameras to cameos then click on the **Save Monitor Layout** button 

and set both the location and file name from the **Save Monitor Layout** window. It is suggested that you use a file name that describes the purpose for the layout.

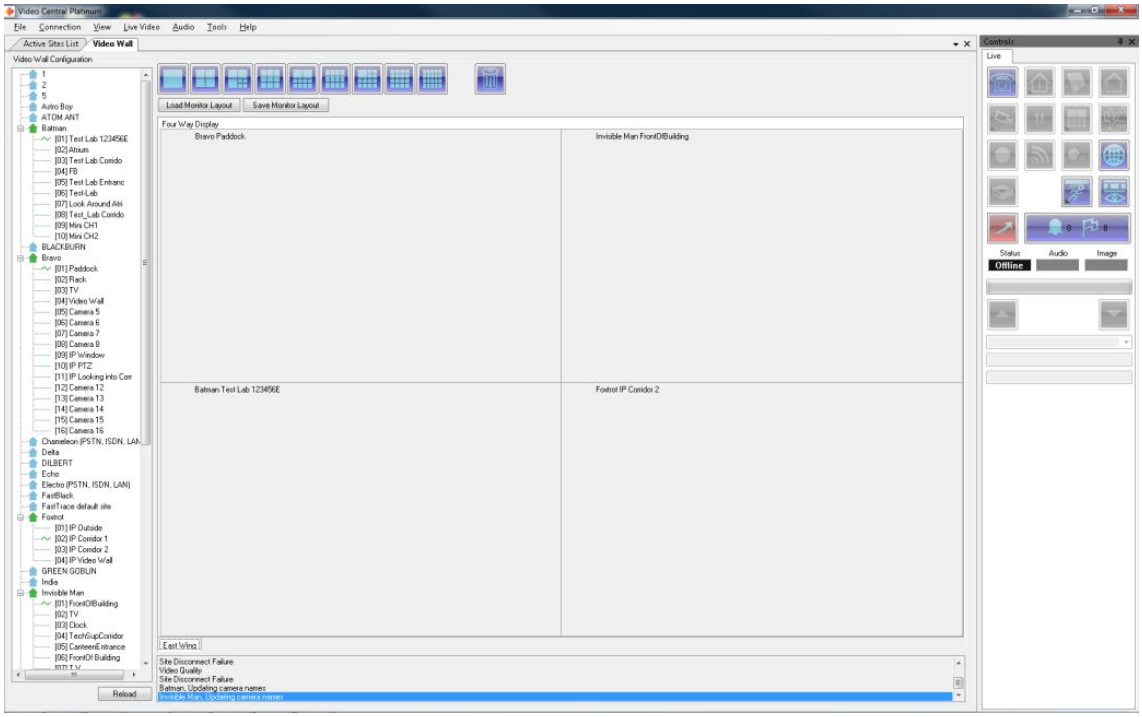
To retrieve a monitor layout click on the **Load Monitor Layout** button 

. Select the configuration location and file name from the **Load Monitor Layout** window.

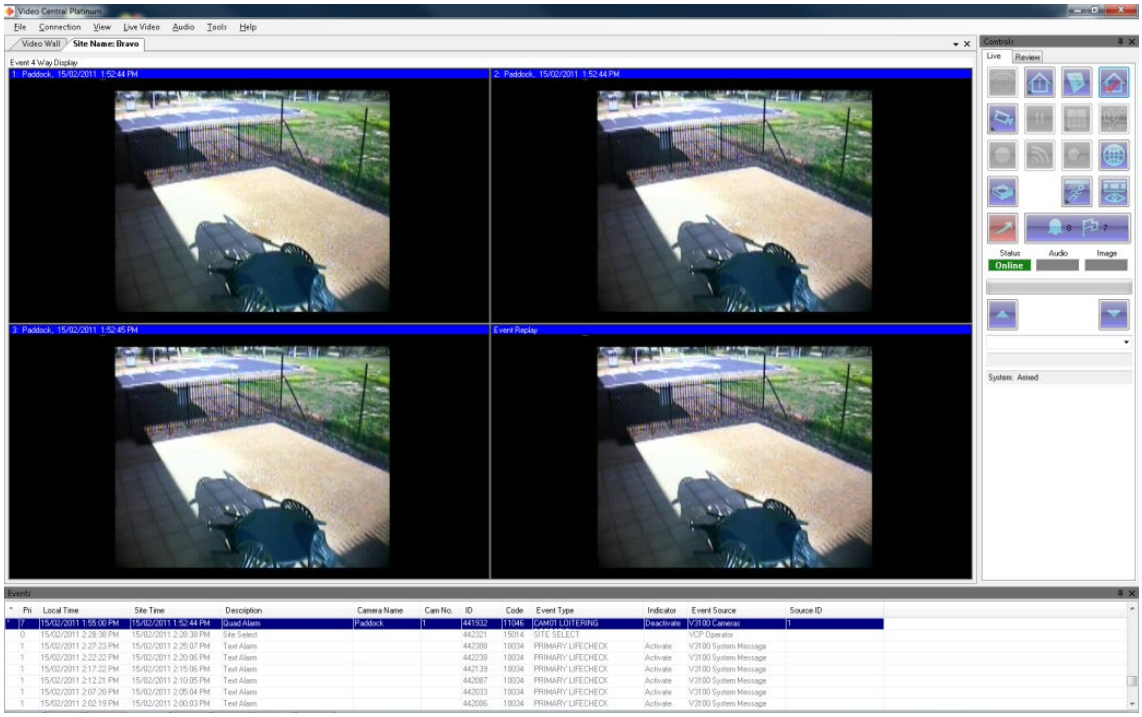
9.11 Switching between VCP UI and Video Wall Control

The user may switch between the Video Central Platinum User Interface while either displaying the Active Sites List or Site View Mode and the Video Wall Control. Selecting the Active Site List or Video Wall Tab towards the top of the Video Central Platinum User Interface performs this.

Video Wall Control



Video Central Platinum User Interface in Site View Mode

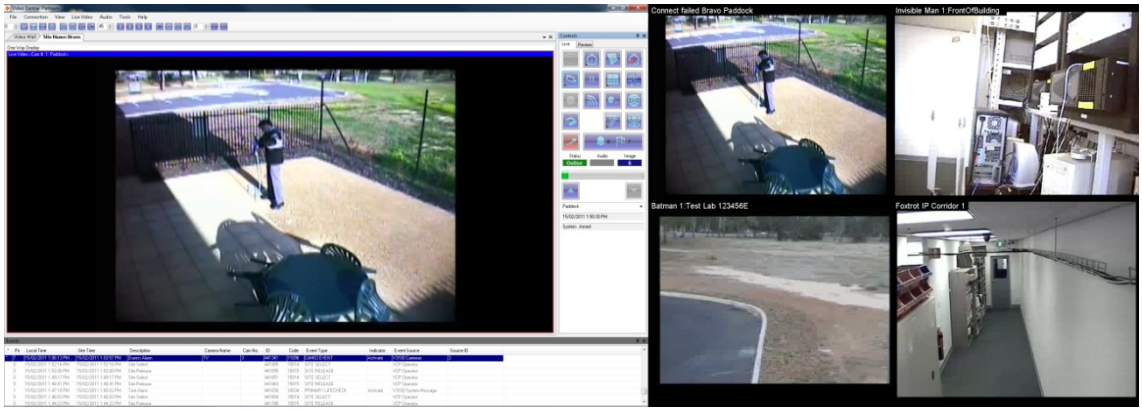


9.12 Viewing Sites on both the Video Wall and VCP UI

Live video can be viewed on both the Video Central Platinum User Interface and the Video Wall.

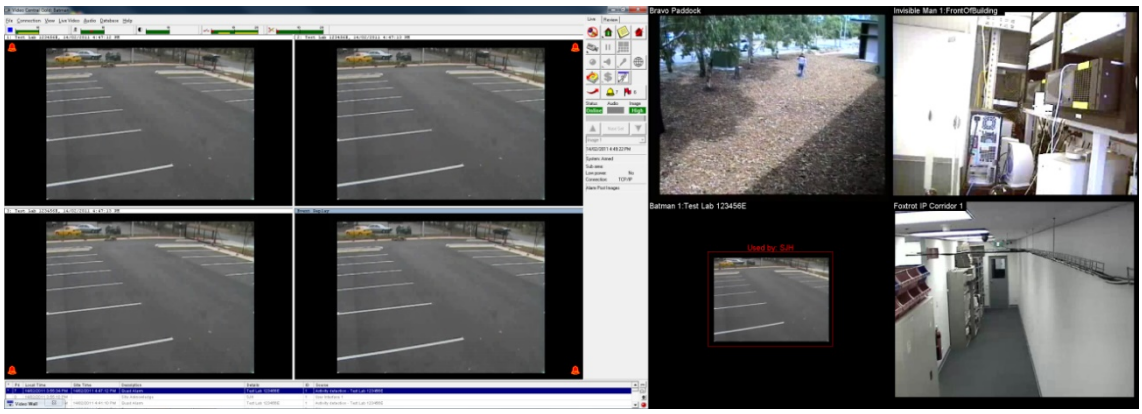
9.12.1 ADPRO XO and HeiTel Sites

Live video can be viewed in Site View Mode within the Video Central Platinum User Interface (left Image) and on the Video Wall (right image) simultaneously.



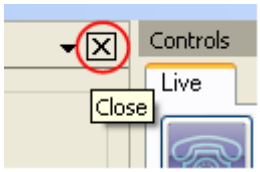
9.12.2 Legacy Sites

When a legacy site (Fast Trace, FastVu, and FastScan) is selected from the Active Sites List (ASL) to be displayed in Site View Mode (left Image) all cameras related to the site will be displayed on the Video Wall as a static image with a red boarder. As soon as the site is released back to the ASL live video will automatically return to the Video Wall (right image).



9.13 Closing the Video Wall Controller on the Video Central User Interface

Close the Video Wall tab by clicking on its **Close** ☒ control, located on the tab's top-right corner, once the Video Wall has been configured with cameras.



Note: Closing the Video Wall Control does not affect the current Video Wall Configuration.

9.14 Closing the Video Wall

In normal use the Video Wall application is not shut down or minimized on the Video Wall PC.

When the Video Wall application is minimized or closed on the Video Wall PC the cameras will not be displayed on any of the associated monitors for that PC.

Typically, all the monitors on a Video Wall PC are used to display the video feed from cameras so the application is hidden from view. Using the ESC key will close the Video Wall application.

Alternately, if the Video Wall application is visible on a monitor you may click on its **Close** button or its **X** button at the top right of its window.



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