



## **PLANETCCTV DVMS / NVMS ARCHITECTURE (v4.0)**

The PLANETCCTV DVMS/NVMS Digital Video Multiplexer, Recorder, Transmission and Automatic Archive Storage System is made up of various hardware and software components – a software suite. Each PLANETCCTV DVMS/NVMS System includes the following components with functionality briefly described here:

### **THE SYSTEM:**

The **PLANETCCTV DVMS/NVMS** Software has been designed to run on commonly available Windows 2000 / XP / 2003 based computer platforms. Very little proprietary hardware is required, making the PLANETCCTV DVMS/NVMS System a cost effective CCTV recording solution, which is flexible and constantly upgradeable in software.

### **1.1 PLANETCCTV DVMS / NVMS SOFTWARE SUITE**

The PLANETCCTV DVMS/NVMS Digital Video Multiplexer has been designed as a **Server-Client** based application. There are several advantages of this, which include multiple viewers accessing live and recorded video. There are six (6) different software programs in the PLANETCCTV DVMS/NVMS Software Suite, they are:

#### **1.1.1 PLANETCCTV DVMS / NVMS VIDEO SERVER**

The PLANETCCTV DVMS/NVMS Digital Video Server software is the heart of the system. The PLANETCCTV DVMS/NVMS Video Server software is responsible for a number of tasks, some of which include:

- Operates as a Service of the Windows 2000/XP/2003 Operating Systems
- Composite Closed circuit video capture
- Video compression – support for both MJPEG and MPEG4
- Allows images adjustment settings per camera for brightness, contrast, sharpness, hue and color saturation
- Support for display and record cards at 60/60, 120/120, 240/240, 480/480 images per second
- Support for select IP Camera systems
- Allows six (6) different recording options
- 1-way audio recording
- 2-way audio conferencing
- Support for HTTP portal to allow download of live JPEG images
- Storage of compressed video to Hard Disk
- Archiving of stored compressed video to 3<sup>rd</sup> party media, for longer storage periods
- Receiving and handling alarms



- Triggering relay outputs in the event of alarm receipt
- Controls select analog (Panasonic, Pelco) and IP network (Axis, Pixord and Merit-Lilin) integrated Pan, Tilt and Zoom (PTZ) Dome cameras
- Supports VMD alarms for each camera
- Allowing network client connections for replay and live viewing of video data
- Transmission of alarm video files to an offsite security basestation or central receiving station
- Logging of all events that occur each day
- Allows up to 8 simultaneous client connections
- Allows configuration of enterprise scale video server systems with analog or IP network cameras
- Allows hybrid class of video recording servers – mixing both analog and network cameras on the same server
- Supports synchronized playback of up to 16 cameras from one or multiple sites
- Allows settable port addressing for firewall compatibility
- Allows, in analog configured systems, for user programmable, sequential camera image output to an external, analog display monitor (with configurable, variable delay)
- Flexible port addressing per server
- Flexible recording resolution per camera
- Flexible video codec per camera
- Supports Maps in multiple formats
- Supports Email Notification of Alarms using SMTP mail servers

### **1.1.2 PLANETCCTV DVMS / NVMS MONITOR**

The PLANETCCTV DVMS/NVMS Monitor is a very useful tool that allows system administrators and PLANETCCTV DVMS/NVMS users to view important data such as:

- Server Name
- Server Serial Number
- Server Start Time
- Server Runtime
- What the average frame rate is
- What the average frame size is
- Who is connected to the PlanetCCTV server over the network
- Allows an administrator to disconnect unwanted client connections remotely



### 1.1.3 PLANETCCTV DVMS / NVMS CLIENT

The PLANETCCTV DVMS/NVMS Client is the software program that allows the user to view live and recorded data either on the same machine, or remote access over a Local area network, Wide area network or via dial up connections. Key features of the PLANETCCTV DVMS/NVMS Client software are:

- The ability to view live and recorded images simultaneously, without affecting recording
- The ability to create multiple video clips of 1-16 cameras simultaneously
- View up to 32 cameras simultaneously
- Replay different cameras at different times, while still recording
- View and replay cameras from up to 8 different PlanetCCTV servers over a network
- Control search and play functions using our simple remote control
- *SmartSearch* to search for movement in a particular area within any camera
- Use 4x digital zoom
- Control select Analog and IP Network integrated Pan Tilt Dome cameras locally or across a network
- View alarm images while still recording
- Control alarm inputs and outputs from the client while still recording
- Modify user selectable screen layout and window size
- Allows images of interest to be exported to a floppy disk as a Bitmap file for evidence
- Export images directly to a windows compatible printer
- Supports remote control of certain Administrator functions
- Creates user defined video clips of up to 16 cameras from one site or multiple sites simultaneously
- Allows up to eight (8) video clips to run simultaneously

### 1.1.4 PLANETCCTV DVMS / NVMS MOBILE

The PLANETCCTV DVMS/NVMS Mobile software allows users to connect to the PLANETCCTV DVMS/NVMS server from remote locations via a telephone modem. The PLANETCCTV DVMS/NVMS Mobile software can be used from home or from a laptop computer while travelling. Like the PLANETCCTV DVMS/NVMS client the PLANETCCTV DVMS/NVMS Mobile software allows the user to perform a number of functions, such as:

- View live or replayed video from a remote site
- Review alarm events from a remote location
- Turn relay outputs on or off
- Disable faulty alarm inputs and outputs
- Reset alarm outputs
- Confirm and verify intruder alarm notification
- Allows images of interest to be exported to a floppy disk as a Bitmap file for evidence



### **1.1.5 PLANETCCTV DVMS / NVMS ARCHIVE AND VIDEO CLIP VIEWER**

Now incorporated as a function of the PlanetCCTV Client, if a PLANETCCTV DVMS/NVMS Server archives recorded data to a hard drive volume or digital tape system, the user will use the PlanetCCTV Client Archive Viewer to review any archived video. The PlanetCCTV Client (viewer) allows the user to:

- Create user defined video clips of 1 to 16 cameras
- Review archive data from yesterday or months ago directly from tape or network drive
- Review alarm data
- Search for video data by using PlanetCCTV's *SmartSearch* feature
- Zoom Digitally up to 4x
- Play video files in half, normal and double speed, forward or reverse
- Transfer segments of video data from the tape drive to a hard disk, hard disk to tape, hard disk to CD or DVD
- Review all cameras simultaneously
- Replay all cameras simultaneously

### **1.1.6 PLANETCCTV DVMS/NVMS BASESTATION**

The PLANETCCTV DVMS/NVMS BaseStation server is used as a Central Monitoring Station tool, to verify alarm conditions from sites using PLANETCCTV DVMS/NVMS systems. Each user of a PLANETCCTV DVMS/NVMS server has the option of sending alarm images to the base station. The PLANETCCTV DVMS/NVMS Base station allows the following functions to be performed:

- Receive video alarms from 32 simultaneous remote PlanetCCTV Servers
- User configurable option to "auto-connect" upon receipt of alarm to PlanetCCTV Servers
- Verification of received alarm images as false or genuine alarms
- Allows remote guard tours of premises using the PlanetCCTV Server
- Turn relay outputs on or off
- Disable faulty alarm inputs and outputs
- Reset alarm outputs
- Confirm and verify intruder alarm notification
- Allows images of interest to be exported to a floppy disk as a Bitmap file for evidence
- Allows the user to view live and replayed data
- Search for video data by using PlanetCCTV's *SmartSearch* feature
- Zoom Digitally up to 4x

**PlanetCCTV DVMS System Architecture**

