

enVigil IP NVR (Network Video Recorder) Features, Functionality and Specification

Data Security

- **Linux based Server:** Operating system and enVigil IP NVR server software reside on a Solid State Drive (SSD) to achieve higher robustness and reliability. Hard disks are used only for storing video data.
- **Built-in VPN:** System comes with built-in VPN capability for secure access over LAN and WAN (Internet).
- **Local and Remote Archiving:** On-demand and continuous archiving, on both LAN for local and WAN for remote storage.
- **Tamper-proofing:** All MPEG4 and H.264 recordings are tamper-proofed. Application software is available to detect whether video has been tampered with.
- **RAID 1, 5 and 6 Support:** Special models available with Multi-drive system supporting RAID to prevent loss of data in the event of a hard disk failure.

Ease of Installation

- **Easy Network Installation:** The system is made easily accessible on the internet without the need for port-forwarding or configuring the router in any way.
- **Easy Camera Connectivity:** IP cameras can be connected to the system in various ways: LAN, WiFi Bridge, Powerline Ethernet and WLAN (Wireless LAN network).
- **Easy Camera Setup:** Cameras can be installed with DHCP enabled – this makes installation easier since static IP assignment is not necessary.
- **Distributed Sensors and Relays:** Relay and sensor boxes can be physically distributed wherever needed and connected using RS485 serial link to the server.

Lower Cost of Ownership

- **Remote Administration:** enVigil IP NVR's can be fully administered remotely using enVigil client.
- **Auto-tracking of IP Address:** Automatically tracks all installed IP cameras in the LAN to keep them connected, even in case when the IP address changes due to power cycling or reassignment. Connection to IP camera is automatically restored if broken for some reason.
- **Hard Disk Failure Notification:** Automatically monitors hard disk performance using S.M.A.R.T and reports possible failure of hard disks.

Functional Capability

- **Multi-Site/Multi-Server Operation:** enVigil IP NVR supports multi-location operation. Each NVR supports up to 32 IP cameras. Multiple enVigil IP NVRs deployed at multiple locations can be operated remotely from a single location.
- **Variety of IP Camera Support:** Supports MJPEG, MPEG-4 and H.264 standard-def, high-def, megapixel and Panoramic cameras.
- **Multiple Video and Audio Streams:** Supports multiple video and audio streams to enable simultaneous live access from multiple locations both on LAN and WAN.
- **Live Remote Access:** CradleWatch client provides remote access and administration from Windows XP, Windows Vista, Windows 7 PCs and Linux computers. Peer-to-Peer (P2P) technology is used to connect enVigil client to enVigil IP NVRs.
- **Two-way Audio:** Listen to live and recorded audio remotely. Also, talk back to the server from a remote location.
- **Live iPhone and PDA access:** Live display on iPhone and PDA with ability to select camera and matrix of live view.
- **Automatic Bandwidth Adaptation:** Monitors available bandwidth and automatically adjusts live matrix preview to give smooth live display by adapting video stream to the available bandwidth.
- **Independent Record and Display Resolution:** Frame rate and resolution of recorded data is set independent of live display. Bandwidth adapted remote live display for smooth display.
- **Panoramic Camera Support:** Support for special 180 degree panoramic cameras.
- **Private Camera Support:** Designate selected cameras as private cameras with per-user access control and ability to exclude selected cameras from shared matrix view.
- **NAS Storage Support:** enVigil IP NVR can be configured to keep all video data on a NAS (Networked Attached Storage).

- **Intelligent Video Analytics:** Various video analytics such as video loss from a camera and motion detection with mask are included in the base system. Face capture is available as additional feature.
- **Intelligent PTZ:** PTZ camera control possible from the client software from a remote location.
- **GUI Recording Schedule:** Intuitive GUI recording schedule featuring continuous recording, motion based recording and sensor triggered recording. Users can define the recording schedule for each camera on a weekly basis.
- **Multiple Monitor Support:** Supports multiple monitor based PCs to centrally manage and monitor multiple enVigil IP NVRs.
- **Flexible I/O boxes:** Connect through RS485 to provide contact and sensor inputs and relay output. A total of 8 I/O boxes each with 4 contact inputs and 4 relay outputs can be connected to each enVigil IP NVR.
- **I/O Control:** Easy to use input and output control panel to remotely trigger digital outputs and monitor input status.
- **Event Log:** Access recording by event log or directly by specifying camera number, date and time.
- **Video Export:** Export a section of the video in AVI format. Video can be exported either locally or remotely.
- **Log Export:** Server log of user actions like configuration changes, login/logout etc. can also be exported.
- **Analog Camera Support:** Analog cameras can be supported by using compatible enVigil NVS (Network Video Server).
- **Auto Recycle:** Automatically recycles and reuses disk when the disks gets full. Separate recycle schedule between recordings and log files.
- **User Authority Management:** Supports customizable user privilege for each user.

Central Monitoring

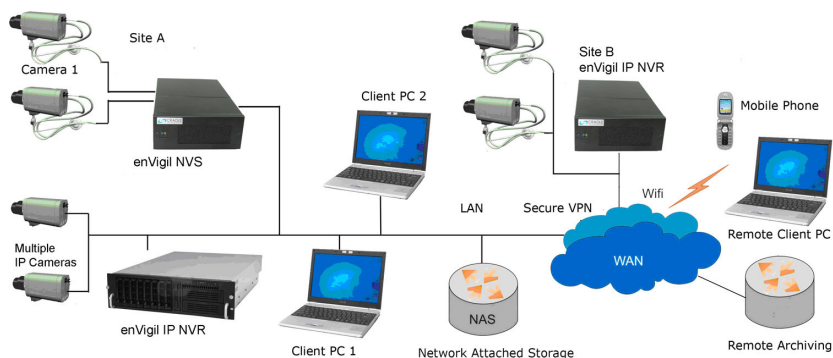
- **Central Server Support:** Cloud based Central Server monitors health of the enVigil IP NVRs (Connected with Internet) and notifies interruption in operation through email messages to a designated person.
- **Central Server for Remote Support:** Arohi Systems engineers can remotely log into enVigil IP NVR for diagnostics and support when access is granted.

Ease of Integration

- **Open Platform:** Linux based server.
- **Support for Integration with other systems:** APIs for integration with third-party systems such as access control, automation, burglar alarm, video analytics, Central Monitoring System and others are available.

Camera Connectivity

- **Wireless Connectivity:** Wireless connectivity to cameras using WiFi bridge, WiMAX bridge is available to reduce wiring and to extend the surveillance network to multiple buildings.
- **Power Line Connectivity:** Ability to make connections to cameras by Ethernet over Powerline in buildings and in parking lots to reduce wiring.



Technical Specification of enVigil IP NVR (Network Video Recorder)

Video	
Display Mode	1/ 4/ 6/ 8/ 9/ 10/ 13/ 16-channel display, sequential mode
Number of Channels	Up to 32
Compression Format	H.264/ MPEG-4/ M-JPEG
Video Setting	Resolution, Quality, Frame rate and Bit rate
Recording	
Recording Mode	Continuous / Scheduled / Sensor Triggered / Motion triggered

Buffer Storage	Pre-recording: 60 sec / post-recording: up to 60 sec
Recording Performance	Supports Megapixel IP cameras. Up to 30 fps HD at 1080P, HD 720P, D1 and CIF
Playback	
Playback Mode	Play, pause, stop, reverse play, single-step, next / back with speed control
Display Mode	Single playback per window view. Multiple playback windows.
Search Mode	By date & time, timeline, event, and intelligent video analytics (IVA)
Intelligent Video analytics	Motion detection, Face capture
Playback Enhancement	Full screen display, video snapshot, recording of live matrix
Remote Archival	Continuous and Time based archival
Storage	
Disk Management	Easy addition and removal of Hard Drive, System and NVR software resides on Solid State Drive.
Hard Disk Failure	Automatic tracking of hard disk health and report failure.
Network	
Support	HTTP, TCP/IP, SMTP, DHCP, Static IP, DNS, NTP, SSL-VPN, UPnP, RSTP, RTP
Camera IP Address & Port	Allows adding LAN / WAN IP camera
Security	
Operation System	Linux-embedded, free from PC crash and virus attack
VPN	Built in VPN for secure communication
On-line Users List	Record of the users currently logged on and previously logged on to the NVR
User Management	Camera access can be separately defined for each user
Alert Notification	E-mail, SMS
UPS	Support APC
Event Logs	Detailed event logs, user login, logout, configuration changes, system warning, hard disk errors, disconnection of IP cameras and UPS status.
Utility Software	
Tamper-Resistant Recording	Check if the recording files on enVigil IP NVR are modified or not (only for MPEG-4 and H.264)
Industry Standards	
ONVIF	ONVIF compliant for adding devices. Registration with ONVIF in progress
Client PC Requirement	
CPU	Pentium Dual-core 2.4 GHz or better
Memory	2 GB or above
Operation System	Windows XP/ Windows Vista/ Windows 7/ Linux
Web Browser	Internet Explorer, Fire Fox
Network Interface	10/100/1000 Mbps or above
View Resolution	Minimum resolution 1024 x 768 pixels or above
Model NVR_EHD8-4D-4001	
Processor	Intel Core 2 Duo
RAM	2 Gb DDR2
HDD	4 SATA 3 3.5"
enVigil software	Embedded with Linux OS on Flash Memory
Certification	UL, FCC, EU