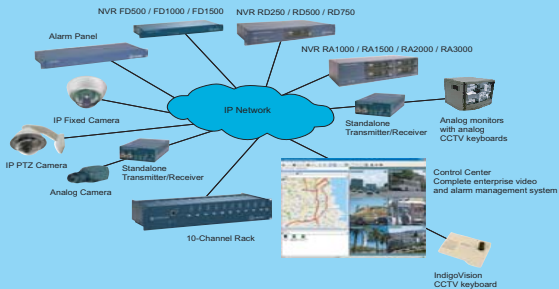


# IndigoVision IP Video & Alarm Management

A complete IP Video solution



IndigoVision offers a complete IP Video product suite, whether you are starting with an existing analog infrastructure and wish to migrate towards a digital IP solution or whether you are looking for new CCTV cameras with built in state of the art IP technology. IndigoVision also offers a variety of ways of integrating your existing security systems with its IP product suite including 3rd party Alarm Management systems and 3rd party Access Control Systems.

The key hardware elements that make up a complete IP Video solution are described in this document. First we look at the capabilities of the IndigoVision IP Dome Cameras which produce IP video direct from the camera. Next we cover the features of Standalone Transmitters and Receivers which are used to integrate analog cameras and analog monitors.

Following that, we describe the range of IndigoVision Network Video Recorders used to record and play back CCTV video. Completing the range of hardware components are the IndigoVision Alarm Panel and the IndigoVision Keyboard. The Alarm Panel allows existing hardware inputs and relays to be integrated into the IndigoVision alarm management system. The Keyboard offers operators a familiar analog keyboard style interface to the IP Video system.

The key software component in the IndigoVision complete IP Video solution is the Control Center video and alarm management application which allows complete operation and administration of the IP Video system. Control Center is described fully in a separate document.

# IndigoVision

## IP Cameras

### IndigoVision PTZ Internal and External IP Dome Cameras

IndigoVision's PTZ Internal and External IP Dome Cameras represent a major step forward in the development of IP-based video systems. The domes incorporate a high quality sensor, robust pan, tilt and zoom mechanisms and IndigoVision's world-leading encoder technology.

IndigoVision PTZ IP Dome Cameras allow very simple and easy deployment of IP-based video systems as they only require a power connection and a single CAT5 cable.

The domes are fully supported by IndigoVision's Enterprise video and alarm management system, Control Center, and Network Video Recorders.



PTZ External IP Dome Camera - Wall Mount

PTZ Internal IP Dome Camera - Wall Mount



PTZ Internal IP Dome Camera - False Ceiling Mount



Fixed IP Dome Camera

- **Privacy zones** 32 privacy zones are available with simple joystick positioning and sizing. They can be shaped on screen by the system joystick or pan and tilt keys. Preset positioning is accurate, meaning privacy zones can be correctly sized. Menu setup allows privacy zones to be fully blanked or shaded. Privacy zones scale proportionally with zoom.
- **Colormono** A simple menu enables the switchover threshold to be set for site-specific lighting conditions or be manually overridden.
- **Picture freeze** The on-screen visible image can be frozen while the dome moves to preset positions, allowing very efficient NVR recording and transmission.
- **Quietness and accuracy** Accurate stepper motors with a pan movement bearing mechanism and direct control of the tilt movement make the dome's operation quiet as well as giving it a highly accurate return to preset positions.

### IndigoVision Fixed IP Dome Camera

IndigoVision's Fixed IP Dome Camera is a high-quality camera with industry-leading MPEG-4 or H.264 compression built-in. It can be installed on a wall or ceiling, with only one Cat5 cable required for full operation, including power. Fully compatible with IndigoVision Advanced Analytics, its direct digital interface from sensor to compression chip gives excellent image quality and performance.

## Standalone Transmitter/Receiver

Standalone Transmitters/Receivers allow a single analog camera or analog monitor to be integrated into the IP Video system. They can be used in conjunction with other IndigoVision products including Control Center, the Windows NVR Software and Standalone NVRs.

- Exceptional video and audio quality: Standalone transmitters introduce high quality and high compression MPEG-4 or H.264 video and audio to CCTV applications.
- High Resolution / High Frame Rate Video: Standalone transmitters **guarantee** 25/30 frames per second at any resolution or bit rate including SIF, 2SIF and 4SIF resolutions.
- MPEG-4 Advanced Audio Coding (AAC) brings new levels of fidelity and frequency response to CCTV applications.

- IndigoVision technology ensures smooth migration from analog to digital technology: converts existing analog-based CCTV to digital remote monitoring systems simply and cost-effectively without equipment obsolescence.
- The same CAT5 UTP cable is used for real-time video, two-way audio, management of PTZ functions and binary I/O alarm triggers.

- Multicast technology allows limitless numbers of users to access video and audio streams using the same bandwidth as one user.
- IP-based video removes geographical barriers thus enabling co-ordinated remote monitoring and communication across multiple locations using standard network interfaces including LANs, WANs, wireless networks and internet communication links.

- Network security: Standalone transmitters / receivers have a built-in firewall which can be configured to restrict communication to specific users.

- Synchronized clocks: use of the Network Time Protocol (NTP) allows for central maintenance and synchronization of real-time clocks inside IndigoVision standalone devices.

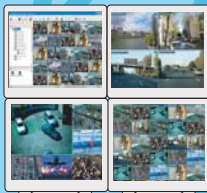
- Web administration: all administrator settings can be configured through a built-in, password-protected web interface.



Standalone Transmitter / Receiver:  
supports one camera or one monitor

## Activity Controlled Frame Rate

This is a powerful feature, unique to IndigoVision's MPEG-4 and H.264 products. When enabled, the unit constantly monitors the amount of motion between frames. When there is no motion in the scene, the frame rate is reduced to one frame per second. When motion occurs, the frame rate is increased to the maximum specified by the user. This can reduce data rates by up to 50-60%, which increases the amount of video which can be stored on an NVR.



Control Center allows all users to display live camera output in up to 25 video panes, all at full frame rate (25x30 fps = 750 fps) and on a full screen. Up to 4 monitors can be used to view additional video panes, with up to 25 in each window.

## Analytics

Motion Detection analytics are carried out by the transmission unit itself. Sensitivity, region of interest and object size can all be selected using the Motion Detection Configuration web page.

- Offers significant reductions in false alarm rates, as it can be configured to ignore environmental light changes, rain and snow, foxes, cats, moving trees, etc.
- Offers motion detection at source, no need to stream until motion is detected.
- Easy configuration, with a user-friendly web page.
- User-configurable object size
- Size-based detection
- Direction-based detection
- Museum mode

Full details of Analytics functionality is available in a separate document.

## 10-Channel Rack

The 10-Channel Rack can take any combination of up to 10 Transmitter or Receiver Rack cards. Each Rack card supports extra functions, such as PTZ, audio and alarm input & output events.

- **Future proof:** upgrade existing analog systems and infrastructure to an IP-based solution. Other modular IP-based products and services can then be added, thus protecting current and future investment.
- **Ease of installation and configuration:** each Rack is shipped in a 2U 19" rack format and includes setup software.
- **Individual cards:** the Rack's backplane design allows each video transmitter/receiver to be hot-swapped. This makes service, maintenance and capacity upgrades easier. The 10-Channel Rack can take any combination of Receiver or Transmitter cards.
- **Additional systems:** the Rack is fully interoperable with IndigoVision's other market-leading products.
- **Network Interface:** Full-Duplex redundant 10/100/1000Mbps Ethernet switch.
- **Power Supply:** redundant power supply.
- **Ultimate solution:** contains transmitter, receiver and configuration software.
- **Interface to existing equipment:** the programmable serial channels and binary I/O interfaces can be used to monitor and control third party products including PTZ, multiplexor and matrix systems.
- **Supports industry standards:** PAL/NTSC video input or output together with bi-directional full duplex audio, alarm (binary I/O) and RS232/RS422 serial comms.
- **Unique application for each video stream:** each of the ten channels housed within the Rack can be customized. Bandwidth, frame rate and video quality can be individually tailored to meet your needs.



IndigoVision 10 Channel Rack

# IP Video & Alarm Management

## Network Video Recorders

The NVR 200 Series provides a powerful and integrated recording and playback system for video and audio from transmitters and receivers, with a choice of integrated or removable disks. Each NVR in a system can simultaneously record and play back pictures at full frame rate. NVRs are managed and configured by the Control Center application. Video can be played back to PCs, analog monitors and standard VCRs.



NVR RD250 / RD500 / RD750 with removable disk



NVR FD500 / FD1000 / FD1500 with integrated disks



NVR RA1000 / RA1500 / RA2000 / RA3000 with RAID

IndigoVision Network Video Recorders include powerful enterprise level features and functionality. All NVRs come as standard with provision for fully redundant power supplies and fully redundant Gigabit Ethernet connections. The RA1000 / RA1500 / RA2000 / RA3000 also have a RAID disk array.

All IndigoVision NVRs can be rack- or desk-mounted and require no additional hardware for operation. They can be located at any point on a network allowing recording and playback across multiple sites regardless of location. A system can deploy as many NVRs as required. Remote NVR management and configuration is performed using an intuitive web-based configuration interface which forms part of IndigoVision's Control Center software.

IndigoVision NVRs record synchronized video and audio. SIF, 2SIF and 4SIF resolutions are all supported. Recordings can be configured to start at specific times or in response to alarms. They can then run for a fixed duration or until a specified time; alternatively, they can also be started immediately by an operator. Once recorded, video cannot be altered, ensuring the audit trail is intact for evidential purposes. Recordings exported from Control Center are protected by a watermark and a digital signature.

NVRs automatically manage the available disk space using policies defined by the administrator. They can be accessed simultaneously locally or remotely by any number of users using Control Center, and have a built-in firewall which can be used to restrict access to authorized users. There are no special network or cabling requirements which means they can be run over existing company networks without degradation. Multiple streams can be used without a drop in frame rates - unlike analog multiplexors, the frame rate of each stream is independent; all streams can be full frame rate if required.

For NVRs RD250 / RD500 / RD750, the estimated gap between recordings when changing disks is 15 seconds. There is no limit to the number of disks that can be cycled through the NVR, and configuration is stored in flash memory so recording configuration is kept with the unit, not the disk.

# IndigoVision IP Video & Alarm Management

A complete IP Video solution

## Alarm Panel

IndigoVision's Alarm Panel connects to a 10/100 Ethernet LAN and provides 32 opto-isolated binary inputs and 8 relay outputs. Positive and/or negative edge triggered inputs can generate events on the IP network which can be used by Control Center to display video from specific cameras, move cameras to preset PTZ positions, activate binary outputs etc. Outputs can be activated remotely over the IP network.



## CCTV Keyboard



IndigoVision's CCTV Keyboard, used to access Control Center's Virtual Matrix

- Desktop keyboard with 3-axis joystick (pan/tilt/zoom)
- Full variable control of speed domes - speeds adjust in proportion to zoom position
- Automatic Dome Protocol Translation (through Control Center software)
- 1 x RS232 port (RJ11 connector) for connection to PC running Control Center Virtual Matrix software (cable supplied)
- Camera, monitor and preset keys
- Focus, auto-iris, auto-sequence, tour keys
- Preset keys
- Full control of Control Center Virtual Matrix
- Power consumption <2.5W
- Color: Cool grey