**VisionNet Technology**
www.VisionNet.com.hk

**Secure everything from anywhere at anytime**

# VisionNet 2003 Product Guide

# What is Network Digital Surveillance?

When we talk about digital surveillance, we mean we use computer-based digital technology to record and capture image, video or audio sources from real life for multiple surveillance purposes, and put them on the network to setup remote access from anywhere at anytime. These surveillance technology tool, we call them "Digital Video Recorder", DVR

# Nowadays Surveillance System

Many large or middle sized companies have already set up their surveillance system long ago. But the majority of those systems are based on Analog, not digital. Analog is like TV signal, that use VHS to record the captured image, Fig.1.1 . We call them Analog Surveillance System. But this kind of systems are bounded in video tapes, user cannot monitor, control, access, or search video remotely. Nowadays, the security surveillance business is in transition. Old analog techniques are increasingly abandoned in favor of modern network-based IP solutions, namely DVR. Investments are moving from the traditional CCTV industry to the IT world of installers and distributors. As digital surveillance provides more versatile functions such as Remote access, search, control and monitor the whole DVR system and so as captured Video. We, VisionNet, is to provide the best digital surveillance solution with our expertise at this moment. And helps most users and companies to pass through this analog-digital gap with a ease.
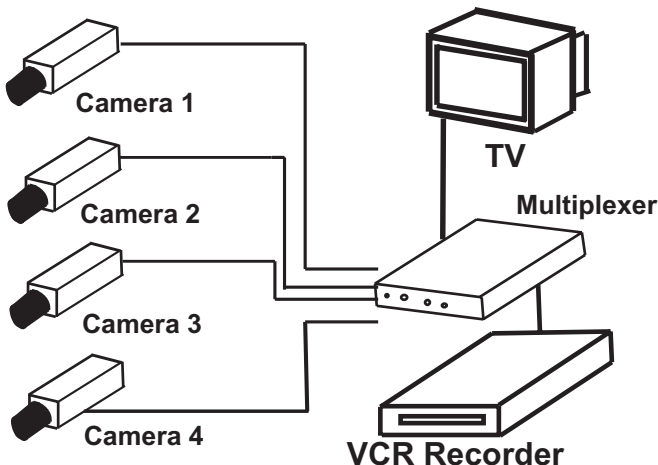


Fig 1.1 All the Captured Video are first transferred to "Multiplexer" for splitting and then output to TV monitor and time lapse VCR Recorder. The whole design do not provide network function to distribute video as digital ones. Also, it needs a lot of VCR to store record. This kind of system will eventually be obsolete over time. As more advanced and versatile functions are critical to meet nowadays different business needs.

# Use of Digital Surveillance System

Actually, the digital surveillance technology can be used in an almost unlimited number of different situations, anyway, most of the users fall into one of the following three categories:

## 1. Security Surveillance
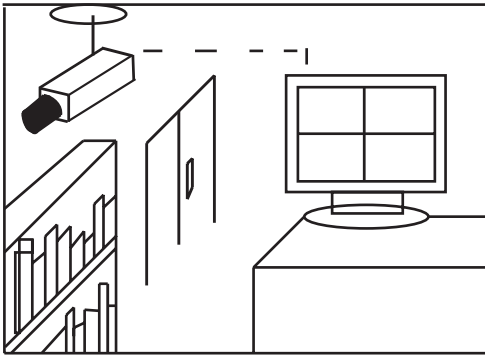


The technology is developed on computer system, namely Digital Video Recorder DVR, all the captured images, video and audio are stored in computer hardisk. This advantage provide much more storage space than VHS so that one 40GB hardisk can record one video source for nearly 3 months. Also, our surveillance system is network based, this advanced functionality makes it highly suited to the mission critical applications involved in security surveillance. Armed with the above revolutionary technology, protection of people, property, assets from accident and crime have been greatly enhanced ever than before. Even more, with greatly compatibility with traditional CCTV Cameras, DVR is a very attractive option for those companies wanted to renew their currently using CCTV surveillance system.

## 2. Remote Monitoring

As our DVR systems are based on existing computer network, users can monitor anything remotely and with mobile at any place by computer notebook,  or home desktops through Internet, WAN/LAN, or even telephone lines, so that authorized viewer can gather information at all key points in real-time. This makes it ideal for monitoring working equipment, scientific experiments, traffic, people, or any places both locally or at a distance.
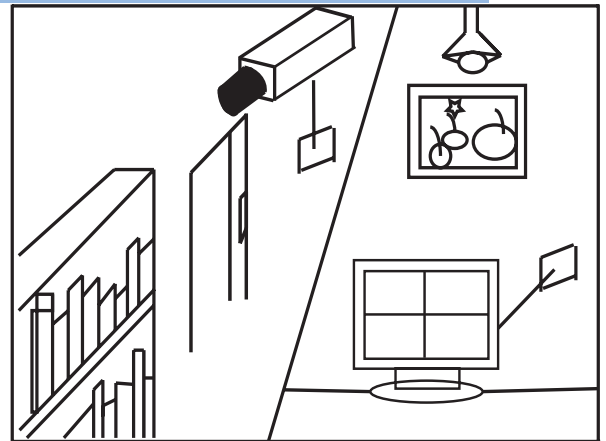


## 3. Network Broadcasting
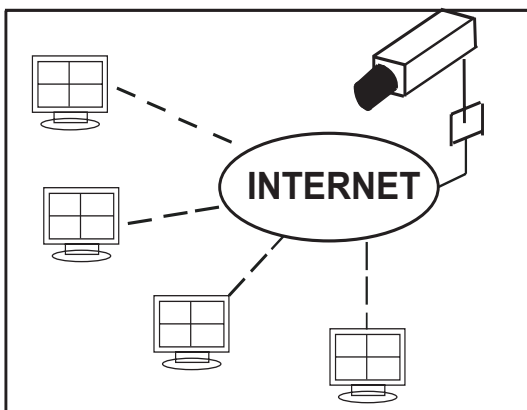


All the video captured can also be used to broadcast over the Internet, providing viewer or audience with real-time information about sporting competitions, business conference, weather or traffic conditions, or used as a business tool to show promoting products or services to customers.

# Analog ~ Digital Surveillance Solution Comparison

Previous method for recording video on tape with tape-recording equipment is an analog type. Namely, each camera connect to one device to split all the cameras' image, and then output them on a CRT monitor, and use VHS to record the image on video tape. Therefore, it is very inconvenient to change the tapes frequently, user may have to review all the tape to find one specific image, and as all the cameras have to be connected separately, it leads to expensive cabling, maintenance costs, and very inconvenient and it lowers the quality of image. However, a Digital Video Recorder (DVR), digitally records the video image so it provides clear image like a picture. It also has a function to record continuously so you don't have to worry about the frequent change of tapes. With the easy distributed digital format, recorded images, video and audio are easily distributed and viewed at home desktops, and notebook wireless through Computer Network, LAN/WAN or the Internet. DVR, therefore, is a video recording surveillance system for the next generation and it is growing very rapidly. In addition to that, it has communication function which enables you to detect remoteness screen even from household and it contains a multi branch of up-to-date function. By contrast, analog CCTV would be obsolete over time as digital technology takes over. Although many companies and organization have invested significantly in analog CCTV surveillance system, VisionNet DVR product range allow users to integrate existing analog system into digital.

# We Provide Versatile Solutions

## Customer Oriented Selling Technique

As our company is customer oriented, we have several solutions to fulfill all customers' needs. We made it possible to combine old system or renew overall with these three following solutions

### 1: Extend existing CCTV surveillance system

This solution is to deal with those customers who already have a complete analog CCTV surveillance system and want to digitalize the recorded video and then further distribute them over the Internet, remotely access any camera at anywhere.

This group of customers can take the DVR system [2] and connect all the existing cameras [BNC output] to the DVR so that they quickly change their system to Digital Surveillance System.

### 2: Completely new digital surveillance system

This solution is to deal with those customers who don't have any CCTV camera and recorder. Under these circumstances setting up a network video system is both simple and cost-effective. This group of customers can take all set of digital surveillance system to meet their different needs, and with our easy installation procedure guide, the installation process should not take more than 1 hour. And they can remotely access to camera with their computers, or notebooks as long as they have gained Internet access, Broadband or telephone lines.
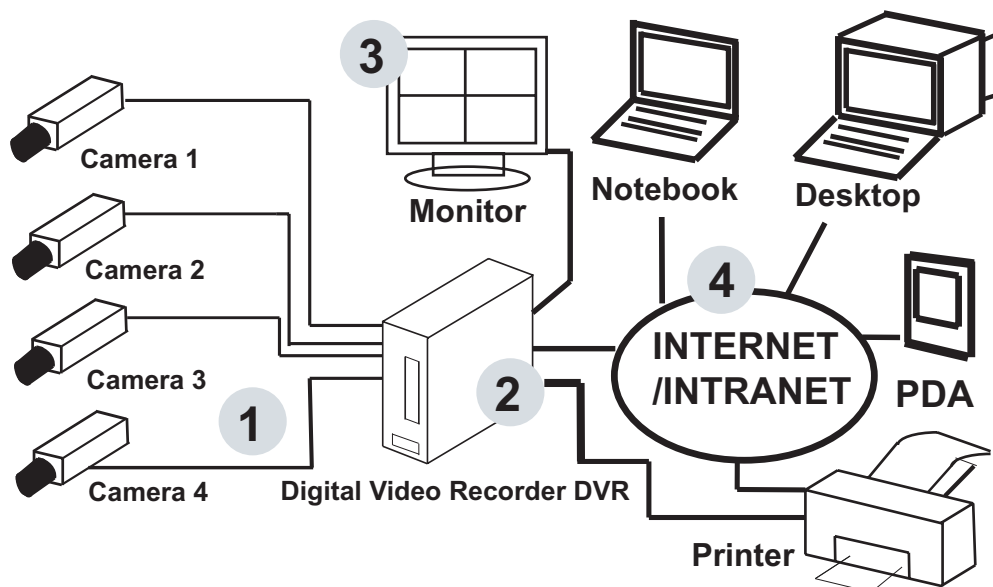


Fig 1.3. As illustrated, digital surveillance system provide extensive network support that connect almost any computer-based systems or printers through computer network, Internet, Local Area Network, and even Telephone Lines. None of these analog technology can provide.

## 3: Connect all the system into one combination

For some middle-large scale company, security is especially important. VisionNets' DVR system enable them to remotely access any cameras connected at the network, as shown at Fig. 1.3. They can monitor all the companies or places at headquarter, This solution is very efficient in saving unnecessary security, maintenance and man-power.
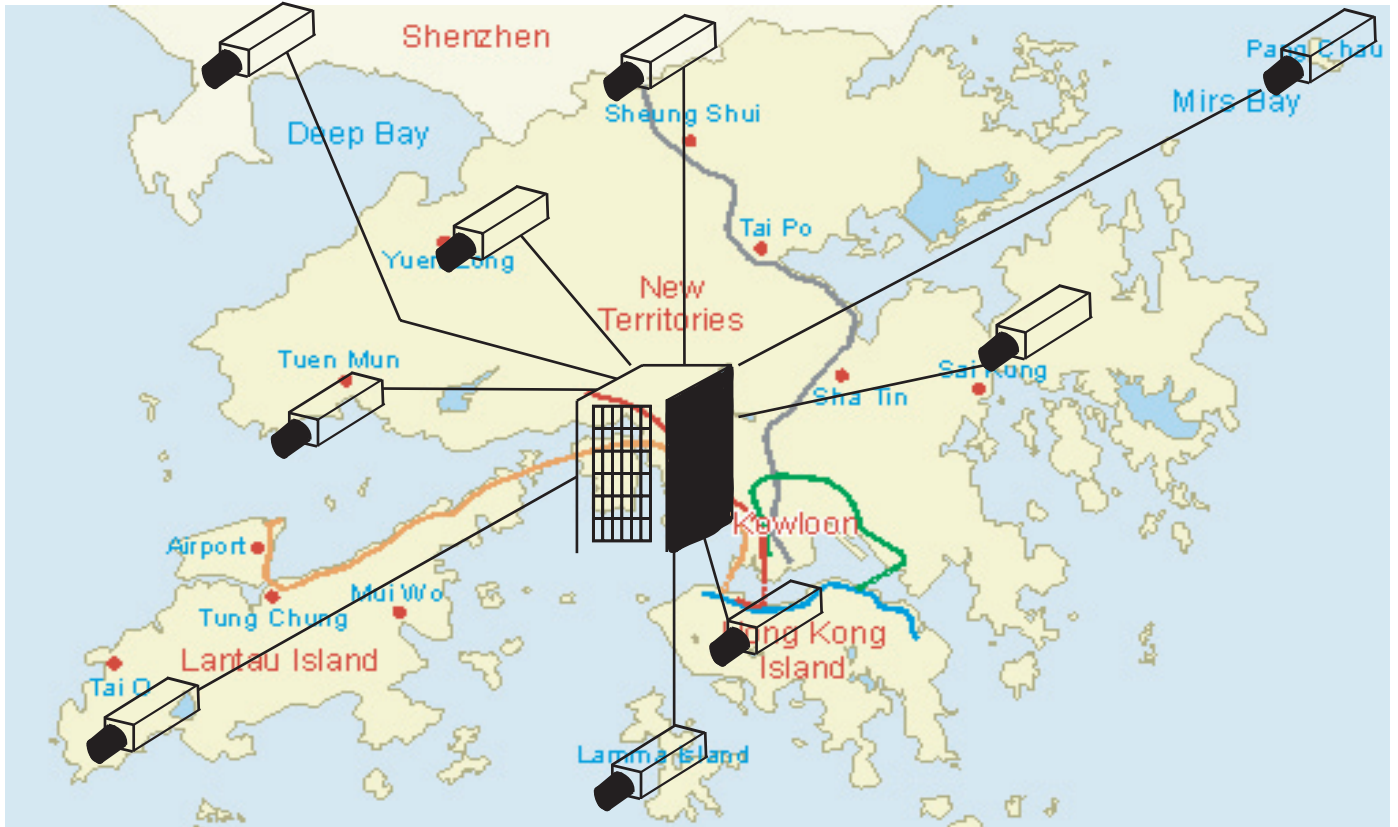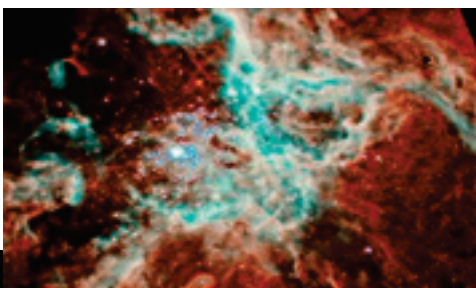


Fig. 1.4 shows a typical layout of a company who have many chain chops around Hong Kong and Shenzhen. Each DVR system at every shops are connected by Internet or VPN, so that Company's Headquarter can easily monitor every shops at the same time and take counter-measures when emergency occurs.

# Benefits and Specialty of Using DVR:

Apart from network-based features, DVR offer all of the following features that are also unique.

## Long Duration Recording:

As VisionNets' DVR system is computer-based and video are compressed with latest MPEG-4 technology which makes excellent quality-size ratio, even more, VisionNets' standard DVR system integrated with 40GB or 80GB hardisk that provide at least one month 24-hour a day non-stop recording of video and audio. In addition, user can define quality and resolution of the image so that the size of recorded image can be adjustable. With these powerful function, most typical users can manage the whole system with a ease.

## Real Time Monitoring:

All the recording or monitoring image of each cameras display at computer CRT/LCD screen at the same time and at real-time. Users can monitor every momentary happening instantly in front of computer screen or remotely through a network by desktop/notebook with wireless technology. That acknowledge users, especially shop staffs at retail industry, whether or not the situation need their presence or any other actions.

## Intelligent Searching and Printing Mechanism:

VisionNets' DVR system split the recorded video file every 15 minutes and they are named by CameraName/Date/Hour/Minute Mechanism. And the DVR program provides functionality of play back, forward, fast forward, backward, skip, slow motion, pause, frame by frame, zooming up and brightness control etc. With this searching mechanism, user can review or print record with a ease by Date, Time and Camera information simultaneously with recording process.

## Auto Motion Detection System:

Motion detection algorithms are integrated into software automatically to detect any moving objects within a programmable detection area, and then trigger alarm device, start recording or auto transmit the image to the surveillance center. This function is ideal to prolong the total recording duration and to check meaningful data more easily.

## Remote Video Camera Control:

Some models of VisionNets' Video Cameras provide Pan/Tilt/Zoom device that enable user can remotely control any Pan/Tilt/Zoom Video Camera by any authorized personnels through computer network.
> ps: Pan/Tilt/Zoom means up and down/left and right/zooming up or down.

## Multiple Recording Mode:

VisionNets' DVR system also provide different recording mode to suit each user applications.

*Non-stop recording:*

This mode records all the captured image to the hardisk 24 hours a day, 7 days a week, non-stop. Until storage space used up, system automatically delete the first hour of recording from the beginning or switch to another storage device [if applicable] to continue recording.

*Motion Detected Recording:*

This mode only records the captured image when motion is detected by the camera. This function is ideal to prolong the total recording duration and to check meaningful data more easily.

*Pre-Alarm or Alarm Recording:*

This mode is similar to Motion Detection Recording, but this mode start recording when motion is detected, or other alarm device is triggered. Also, system would not delete the recorded data. This function is an alternative for better security reason during non-office hour.

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## High Quality image and Easy Distributed

User can define recording image resolution and Frame/sec rate to ensure the best quality. Image resolution can be up to NTSC:640x480/PAL768x524. That is bigger and more clear than standard VHS-based system, VHS would break, deteriorate or distort over time, but DVR do not, they preserve over time. And all the recorded video are digitalized, users are able to distribute video real-time on the Internet as a business tool, easy backup or search data, and monitor real-time through computer network.

## Easy to Use:

VisionNets' DVR System are well installed and setup when sold, users can easily manage and use all the functions with our graphical user manual or our expert technical support even if they have little knowledge about computer or network infrastructure.

## Backing up Procedure:

VisionNets' DVR products are equipped with normal CD-size CD-Recorder and Floppy Drive for data backup or permanent storage purposes. One CD-Recordable with 650MB storage size costs only few HKD that let user backup any data cost-efficiently. Floppy Drive provide easy mobility to store snap-shot image for critical situation. Indeed, this solution is much more economical and efficient than typical VHS-based recorder.

## Large-Scale system compatibility and Integration:

### Extend existing CCTV System:

If your company already have analog CCTV surveillance system installed and would like to change to DVR. Then VisionNets' DVR system provide great compatibility and integration that supports most CCTV Cameras configurations, whether Pan/Tilt/Zoom or CMOS miniature camera. That costs you as little as possible to revolutionize digitally and change to computer network-based for more efficient surveillance and security.

### High compatibility of the system

Except the good compatibility of CCTV Cameras of VisionNets' DVR system, it also provide excellent compatibility to ATA hardisk, USB Keyboard or mouse, Printer, Speaker and Internet Service Provider. As VisionNets' is customer-oriented, our marketing strategies is to let users select their own freely. Users can choose their favorite peripherals with pleasures.

## Network-Based Solutions:

VisionNet's DVR system provide excellent solution for those company owners at remote area. All the system are computer network-based, users, especially company or school, can easily combine other computers or share Internet access by their existing Local Area Network. Also, company owners can use their notebook, remote desktop to monitor the situation real-time wired or wireless through the Internet. Salesmen can show to customer real-time about companies' products, activities, or promotion by web browser or DVR Remote Access Tool. Remote user can also control Pan/Tilt/Zoom Cameras, manage, search record or monitor the situation. However, in order to secure the data inside the DVR system, authorization user account and password are required of course.

## Remote Control of the DVR system through Internet or Network:

Perhaps the most awesome function of VisionNets' DVR system over the other competitors is - Remote Control and Access Data. As long as user is authorized by the system, who may control the DVR program to perform better setting or monitoring, or access into database to view, download, backup recorded data. Our systems is far more reaching than others could imagine.

## Excellent System Security:

The inner core and setting of VisionNets' DVR system are protected by multi-level user account and password. These user-defined password and user level access control enable company owners to organize the operation and management of the system systematically. Also, when emergency occur, recorded video data automatically transmit to surveillance center or other computer through network to prevent unauthorized third party to destroy any data inside.

**System Stability:**
VisionNets' DVR system are well tested and integrated before being sold. And our systems are able to record and capture data independently 24 hours a day non-stop. In addition, Software Watchdog function prevent system hang up during operations. It provides superior system stability over time.

**Low Total Cost of Ownership:**
Armed with so many high-end and revolutionized technology, making the impossible to real-life applications, the total cost of ownership is not only even more economical to analog VHS surveillance system, with low maintenance and management cost, low installation and cabling cost, it is the price that almost most shop owners, home users, companies no matter large or small could afford.

# Applications:

The reason of the rapidly growing in both digital surveillance technology and market are associated with increasing the opportunity to do things more quickly and safely, thus saving time and money at the long run.

## Digital Network Surveillance System:
 - Computer-Network based
 - Long Recording duration
 - Remote Real-Time Monitoring Capability
 - High System Stability and Security
 - Low Total Cost of Ownership

Main applications of our customers include the following several business:



## Retail:
It helps to keep store owners better informed of consumers and employees behavior, prevent shop-lifting, robbery, burglary, arson, wandering, and numerous property crimes and even make store management more efficient.

## Education:
Digital Network Surveillance are increasing being used in schools or other educational establishments for security purposes and remote monitoring. Security Staffs or teachers are able to monitor every playground, areas, corridors, halls and classrooms every minutes to ensure the safety of every person in the school, and to avoid wandering and trespassers around schools' perimeter. It provides great help to students who afraid sexual or violent assaults during education. Parents can monitor the performance of their children at class while working through Internet. Administrators are better informed of the environment situation of particular school, and so as to provide better management.
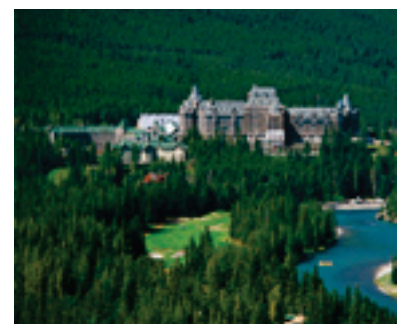
### Industrial:

It helps to keep factory owners better informed of employees behavior, prevent numerous property crime such as burglary and arson, easy management with each working procedures of production, safety of warehouse even at remote locations.

### Office:

Apart from better security function of offices, company owners can monitor employees behavior while he is away or at vacation. Employees can also show every problems to other staffs easily for better solutions. Reception can observe who is visiting or entering.





### Household:

Every family members can remote Monitor of elderly or children at home while at work to better informed when household accidents or emergency occurs. In addition, their household are well protected from burglary or robbery.

### Car Parks:

Security Staffs can monitor every corners of a typical car parks effectively to avoid stealing of vehicles, wandering, check and record every ins and outs of vehicles automatically everyday.
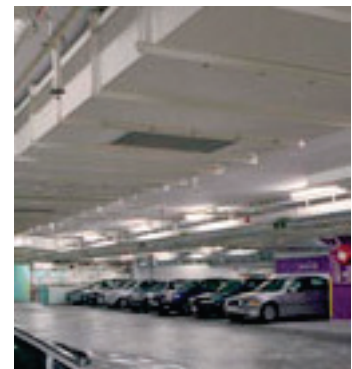




### Transportation:

It helps to keep people better informed of the traffic or weather condition at every different locations through computer network everyday, morning, afternoon, or at night time.

# Conclusion

Digital video surveillance is the latest trend and development in the security and surveillance industries. Customers are demanding more advanced surveillance systems for more secured and effective security monitoring. With advanced technologies and high speed data transmission via the Internet, surveillance technologies can now offer real-time transmission and monitoring from almost anywhere, at anytime.

# How to Buy

Contact to our Sales Team for more information:

sales@visionnet.com.hk