

SCode V3.5.1 (SP-601 and MP-6010)

Digital Video Network Surveillance System

Core Technologies

Image Compression

MPEG4. It supports high compression rate with good image quality and reduces the requirement of bandwidth during remote image transmission.

Image Data Rate

Dynamic data rate = 50 ~ 180 MB/Hour/Camera

Average data rate = 120 MB/Hour/Camera

Average data rate = 1.2 KB/Frame

The above data is under the conditions:

Resolution = CIF, PAL = 25fps or NTSC = 30fps

Separated Monitor and Recording Speed

The monitoring speed and the recording speed can be set in different speeds. For instance, in 16-channel DVR machine, monitoring speed can be set at 25/30fps and recording speed at 12/15fps.

Each channel can be set independently.

Monitoring Speed

The total monitoring rate of one SP-601/MP-6010 card is :

PAL = 400 fps, NTSC = 480 fps.

When one SP-601/MP-6010 card is connected with 16 cameras, the monitoring speed of each camera can get PAL = 25 fps/cam, NTSC = 30 fps/cam, simultaneously.

Recording Speed

The total speed of one SP-601/MP-6010 card is :

PAL = 400 fps, NTSC = 480 fps.

When one SP-601/MP-6010 card is connected with 16 cameras, the recording speed of each camera can get PAL = 25 fps/cam, NTSC = 30 fps/cam, simultaneously.

Audio

It uses G.723 audio compression technology.

Sampling rate = 10K Hz / 20K

Data rate = 20 / 40K bps

Each camera can have one audio inputs. One 16-camera DVR machine can support 16 audio inputs and 1 audio input that is using PC's sound card as the input and used for local audio broadcast.

Direct TV Signal Output (Call Monitor)

Allows the output the video and audio signal directly to a TV monitor. The output signal is a standard composite signal.

Image Motion Detection

A precise algorithm is used to detect accurately any image changes in real time.

■ Suppress the light flashing problem

■ Reduce the false alarm probability

Board Specifications

SP-601

■ PCI interface

■ 16 video inputs

■ 16 audio inputs

■ 1 on-board video output port for Call-monitor function

■ 1 on-board audio output port for call-monitor function

■ support QCIF, CIF, 2CIF, VGA, and D1 resolutions



M)-6010

■ mini-PCI interface

■ 4 video inputs

■ 4 audio inputs

■ support QCIF, CIF, 2CIF, VGA, and D1 resolutions





DVR Software Features

Video Monitoring

Depending on the number of installed channels, **SCode** can display 1/4/6/9/16 split windows. The date and time, the HDD status, and the working information are displayed in the user interface.

■ Support 2 modes of Graphic User Interface (GUI)

Provide Simple GUI and Advanced GUI

■ Display speed

The total monitoring speed of one SP-601/MP-6010 card is : PAL = 400 fps, NTSC = 480 fps.

When one SP-601/ MP-6010 card is connected with 16 cameras, the monitoring speed of each camera can get PAL = 25 fps/cam, NTSC = 30 fps/cam, simultaneously.

■ Monitor resolution (Pixel²)

PAL : 176x144, 352x288, 704x288, 704x576

NTSC : 176x120, 352x240, 704x240, 704x480

■ Split window

Offer 1, 4, 6, 9, and 16 split window modes.

■ Full screen window : Offers full screen mode.

■ Page change (Auto scan)

When the system is in the 1 or 4 split window mode, displaying of each camera window can be rotated automatically one after the other during set intervals.

■ Image window control

Allow to view or hide the cameras' image without influence the recording function.

Allow to assign the different users to view the different cameras.

■ Assign a camera name

Sets the camera name and displays the name on the image window.

■ Show camera's name

Allow to show the camera number, camera name, and date & time on the image. The user can select the color and the position for optimal visibility against the background.

■ Adjustable input video signal

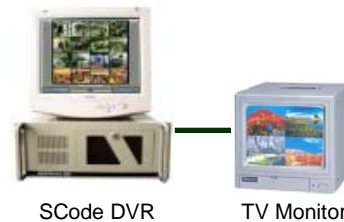
The parameters of input video signal like hue, saturation, contrast, and brightness are adjustable.

■ Right-click command window

Provide the right-click command. Common-used commands are collected in this command window. It's handfull for user to operate the system.

■ Provide device information check

Allows the user to edit one device information to each camera and I/O device. It helps the local user and the remote user to check the device information.



Call Monitor

Each SP-601 board allows to output one video and one audio directly to a TV monitor. The output signal is a standard composite signal.

Video Recording

Support 1 ~ 16 camera's recording in one DVR machine. Each camera can be set up independently.

■ Image compression technology

MPEG4.

■ Recording speed

The total speed of one SP-601/MP-6010 card is : PAL = 400 fps, NTSC = 480 fps.

When one SP-601/MP-6010 card is connected with 16 cameras, the recording speed of each camera can get PAL = 25 fps/cam, NTSC = 30 fps/cam, simultaneously.

■ Recorded resolution (pixel²)

PAL : 176x144, 352x288, 704x288, 704x576

NTSC : 176x120, 352x240, 704x240, 704x480

■ Video recording control

Allow to start or to stop the recording function of all cameras simultaneously. The user can also separately control the camera recording function.

■ Adjustable recorded image quality

21 levels of recorded image quality are offered. The user can adjust the image quality, accommodating limitations of the network or manner of file transfer.

■ Recording mode

Provide 4 modes : Manual recording mode, Auto recording mode, Schedule recording mode, Recording triggered by image motion detection.

Voice Feature

It uses G.723 audio compression technology.

Sampling rate = 10K Hz / 20K

Data rate = 20 / 40K bps

Each camera can have one audio inputs. One 16-camera DVR machine can support 16 audio inputs and 1 audio input that is using PC's sound card as the input and used for local audio broadcast.

Local audio function

Support 16-channel audio monitoring and recording capability.

Local voice broadcast

Support 1 channel audio input used as the local voice broadcast.

Remote audio function

Support audio monitoring and recording capability by through digital network communication.

Remote audio broadcast

The remote user can send his voice to any one or all DVRs.

Scheduled Recording

The user can program a recording schedule for each one camera. This feature can avoid redundant daily operation.

It support 4 kinds of the repeat modes :

Only once, every day, every week, every month

File Storage

Each camera will create its own video files.

Storage format

AVI format.

The stored video can be played by M.S. Media Player directly.

Adjustable video film length

The default recording length of the video film is set to 60 minutes. It's adjustable by minute.

Adjustable HDD reserved space

The user can arrange HDD space (used by DVR machine) by adjusting the reserved space.

Multiple HDD storage

SCode DVR can support unlimited number of HDD to store video files. The system will switch to the next HDD automatically, when the working HDD is full.

Recyclable recording

It enables the system to continue recording new video files when all hard disks are full. The old files will be deleted automatically in order to store new video files.

HDD full alarm

While the HDD is full, the system can play a sound to inform the user.

Image Motion Detection (RDMD)

This real-time image motion detection mechanism checks each incoming video frame. It triggers the recording function and executes alarm functions like, sounding alarm, taking pictures, enlarging the video window on screen, or enabling its external output port.

16 sensitivity levels are offered by the system.

Image Mask

Allow to hide part of the image by using the image mask function.

Snapshot

The user can take pictures while the system is in the monitor mode, recording mode, and playback mode. The picture will include date, time, and camera name. And, every camera can have its own storage folder.



eMAP

Supports an eMAP to locate camera positions. They are shown as floor plan and show their working status.

PTZ Control

By RS232/485 converter, 1~16 camera plates or speed domes can be controlled.

Plate control : Auto, Pan, Tilt

Lens control : Zoom, Focus, Light

Speed control : Zoom, Pan Tilt

External control : Wiper, Heater, Fan, Lighter

Available PTZ controllers

Paten PT846M, Lilin, Chiper

Available speed dome

Lilin, Dynacolor, Philips, TOA, Pelco D, Pelco P, Ganz, Kalatel, VSD128, JY2000, AD

I/O Control

The user can use the external I/O controller (by through RS232/485 converter) that the system can interact with external devices like IR sensors, vibration sensors, relays, etc. to enhance the detection capability of the system and to extend the control capability.

Available I/O controllers

Paten PT811M, P16R16 / P8R8, Jabsco, DCTRLS, Mainvan, S88RM, and etc..

Alarm

If the camera detects the image changed or the external sensor detects one event, it will trigger the alarm functions

Alarm detector

Provide the motion image detection of camera and external sensor to detect the alarm event.

■ Alarm log

If the machine detects an alarm event, the system will write this alarm event with the related information into an alarm log book.

It can execute alarm actions like: Play an alarm sound (Every device can have its own alarm sound), Trigger the system to record, Take a picture, Enlarge the monitoring image, Activate the external equipments.

■ Remote alarm function

It can execute alarm actions like: Require remote SCode Clients to sound a pre-pointed alarm, Send live video images to remote SCode Clients.

Once the camera or external sensor detects an event, it can inform the multiple remote SCode Client machines. One camera or one detector can send multi-camera's live image to the remote SCode Client.

It also can request the remote SCode client to sound the different pre-point alarm.

■ Send alarm to remote telephone

At an alarm event, the SCode DVR can inform remote telephones or mobile phones by a recorded voice message through the modem.

■ Send alarm by emails

At an alarm event, the SCode DVR can send a mail to multiple email addresses.

■ Alarm schedule

Users can setup a schedule to activate the alarm functions. It supports 4 kinds of repeat modes:

Only once, every day, every week, every month

■ Play an alarm sound on requested by remote user

SCode DVR's can accept commands sent by remote SCode Clients to sound an alarm, stored in its sound bank.



Playback

Allow to play 1 ~ 16 video films, simultaneously.

■ File search

Allow to search the films by time, camera name, camera number, and file name.

■ File statistics

Allow to count the total file number and total file size of the selected files or one day's recording, automatically.

■ Multi- film playback capability

Allow to play 1 ~ 16 video which are located in different time, simultaneously.

■ Operation

Skip foreword, Skip backward, Pause, and Step (Frame by frame) operations are offered.

Allow to play videos all together, or a particular one.

■ Scroll bar control

Quickly access a special time in one video file, by moving the scroll bar, directly.

Allow to play videos all together, or a particular one.

■ Change the camera information's color

Allow to change the text color of the camera information shown on the image window.

■ Playback speed control

Playback speed : 1/8, 1/4, 1/2, 1, 2, 4, 8 times.

Allow to play videos all together, or a particular one.

■ Zoom in

The playing video can be zoomed.

■ Export video files to CD-R/RW

The user can export the interested files to the CD-R/RW, directly. While in export the video files, the user can make a copy of the playback program into the CD disk.

System Information Check

Allow the user to check the below system information :

■ HDD status

■ System operation history

■ System login history

■ Alarm log history

Password Protection

■ User authorization

The system administrator can authorize different users with different operation functions and view the different cameras. The setup includes authorization settings for local and remote operations.

■ Local password protection

The password protect mode can avoid unauthorized access at the local site.

■ On-line to change login name

It is allowed to change the login name without closing the program.

■ Remote password protection

If users want to access a SCode DVR from remote site, the system will check the user name and password.

Automatic Function

■ Auto power-on execution

The system can be launched automatically, after powered on.

■ Auto execute recording

The system can execute the recording function automatically after it is launched.

■ Auto shut down

The system can be shut down at a preset time automatically.

■ Auto reboot

The system can be rebooted at a preset time automatically.

■ Auto close machine

The DVR machine can be closed automatically after the DVR program is quitted.

■ Auto link to server

After the system launched, DVR can link to SCode Server automatically.

Keyboard Control

■ Keyboard lock

Provide keyboard lock function to avoid unexpected persons who try to access Windows.

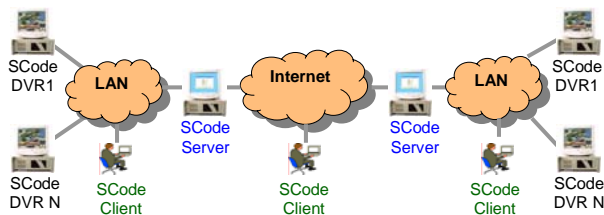


CMS Software Features

Using an existing data network, the system can expand from a local point to a network system. This networking capability can link all **SCode DVRs** to act as a single surveillance system. Using this remote access feature, a user can construct a centralized security center.

There are 6 unites **SCode CMS (Central Monitoring System)**:

- SCode DVR
- SCode Client : Central Monitoring System program
- SCode SimpleClient : Remote access program
- SCode Server : Communication server program
- SCode Central Server : Central server program
- SCode IE Viewer : Remote viewing by IE browser



Network Capability

■ High transparent in network

SCode Client can pass through NAT devices (Route, Gateway, and IP router, etc.). This feature can allow the user to access the local and remote SCode DVRs located in the different networks.

■ Multi-server network structure

Provide the multi-server structure. It allows to link the **SCode** security network system into a big network.

■ Central-server network structure

All of the SCode server can link to one SCode Center Server to build a centralized network structure.

■ Multi-point network access capability

For any **SCode Client**, it can access different SCode DVRs which are located in different networks, simultaneously.

Or, all SCode DVR's camera can be accessed by the different **SCode Clients** which are located in different networks, simultaneously.

■ Multi-camera access capability

SCode Client allows to access 1 ~ 64 remote cameras from 1 ~ 64 different remote SCode DVRs, simultaneously.

■ Communication protocol

Provide TCP/IP and UDP/IP. These 2 protocols can work in **SCode Server**, together.

■ Auto link to SCode Server

SCode DVR can link to the **SCode Server** after the machine is powered on.

■ Support static/floating IP

SCode DVR and **SCode Client** can use static or floating IP.

■ Support physic/virtual IP

SCode DVR and **SCode Client** can use physic or virtual IP.

■ Support Domain Name Access

SCode server can be accessed by the domain name.

■ Image transmission rate of one SCode DVR

It can send 60fps / 50fps in 512 Kb bandwidth (In CIF resolution)

■ Image compression technology

MPEG4 and xVid.

Remote Link Operation

■ Manual link

The user can view the remote camera one by one or view all cameras of one SCode DVR simply one-click.

■ Group link

This function can allow the user directly to access the different cameras which are installed in different DVR machines located in different **SCode Servers** by one-click.

■ On-screen setup of Group link

Allow the user to save the settings of group link while in monitoring the remote cameras. It can reduce the setting procedure of the group link.

■ Group scan

Allow the user to view the different group link at a preset scheduled timing table.

■ Auto speed up the image transmission rate

The system will auto speed up the image transfer rate after the user enlarges the image window.

■ Auto update the linking status

The linking status table will be automatically updated in time, if any change is happened in **SCode** network.

■ Monitor the current data flowing rate

It offers the information of the receiving data rate to the user. It can help the administrator to arrange the communication bandwidth. It offer 2 kinds of this information : fps and Kb/s.

Remote Audio Broadcast

SCode Client can send the sound to any one or all DVRs.

Remote Play Alarm Sound

SCode Client can request the remote SCode DVR to play an alarm sound which is stored in the remote DVR's sound bank.

Remote Control

■ Adjust the transmitted frame speed

Allow to change the transmitted frame speed of each camera from **SCode Client**, independently.

■ Adjust the transmitted image quality

Allow to change the transmitted image quality of each camera from **SCode Client**, independently.

■ Adjust the camera signal

Allow to adjust the camera's video signal (brightness, saturation, contrast, and hue) remotely.

■ Remote PTZ control

Provide PTZ control from a remote site.

■ Remote I/O control

Users can control the I/O controllers of one DVR machine from a remote site.

Remote Data Retrieve

■ Remote file download

Downloads the video files from remote SCode DVR.

■ Remote information check

Allows the user to check the remote DVR's information : System operation history, System login history, Alarm log history.

■ Remote device information check

Allow SCode Client to retrieve the camera's device information from the remote DVR.

Remote System Setup

■ Remote user management

Allow to change the user setup of remote DVRs.

■ Remote auto function setup

Allow to change the auto function of remote DVRs.

■ Remote recording schedule setup

Manage the recording schedule of remote DVRs.

■ Remote alarm schedule setup

Allow to change the alarm schedule of remote DVRs.

■ Remote alarm function setup

Users can change alarm settings of remote DVR's.

Remote Alarm

SCode Client can receive the alarm event sent by the remote SCode DVR machine. SCode DVR machine can inform multiple SCode Clients at the same time.

■ Video Alarm

SCode Client can automatically receive and store the living video sent by from one remote DVR which has an alarm event happened.

■ Audio Alarm

After SCode Client receives one remote alarm from the remote DVR, it can play a pre-appointed sound to different camera or external sensors.

■ Alarm indicator

After SCode Client receives one remote alarm, it can turn on one LED indicator to inform the user.

■ Alarm log table

After SCode Client receives one remote alarm, it will write this alarm event into one alarm log table.

Instant Playback

Allows to re-play the video immediately without running the playback program.

Local Operation

■ Split window

Offer 1, 4, 9, 16, 36, 49, and 64 split window modes.

■ Video recording

Allow to record the incoming video while in remote monitoring.

■ Take pictures

Allow to take pictures while in remote monitoring.

■ Remote audio recording

Support audio monitoring and recording through digital network communication.

System Records Check

Allows the user to check the below system records :

■ System operation history

■ System login history

■ Alarm log history

Password Protection

■ User authorization

The system administrator authorizes different users for different operation functions. It includes setup of local and remote operations.

■ Local password protection

Multi password protection modes avoid unauthorized access at the local site.

■ Remote password protection

If the user wants to access a remote DVR, the remote DVR will check the user name and password.

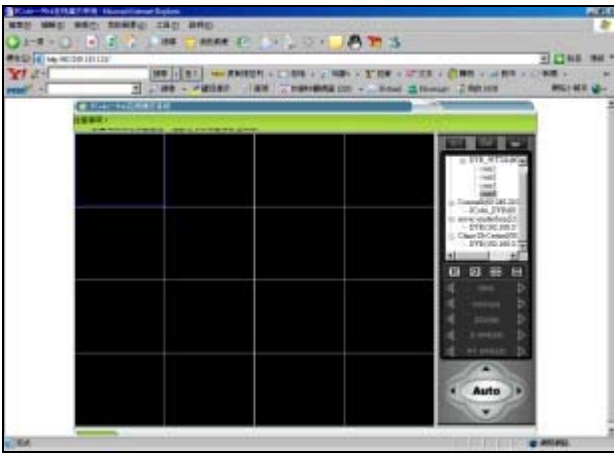
■ Remote auto login

If users want to access a remote DVR, the SCode Client can send the user name and password to the remote DVR automatically. If the user name and password is right, the remote DVR will accept this access. If not, the SCode Client will request the user to do the login job manually.



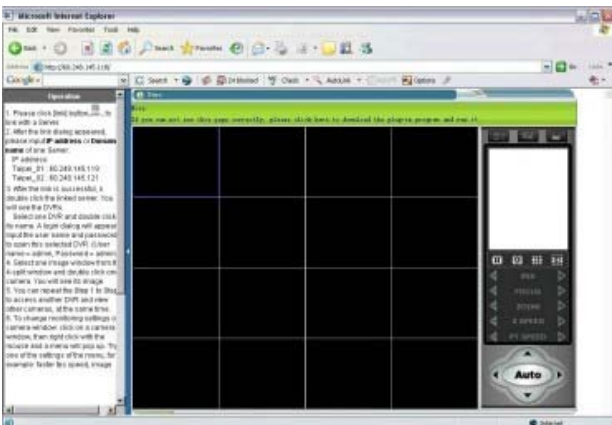
Remote eMAP

Support a multiple layer remote eMAP. The user can easily know the whole working status of the security network structure and operate it.



Support IE Browser

Allow to access the remote DVR by IE browser. In this way, the remote user can easily obtain camera's image from internet.

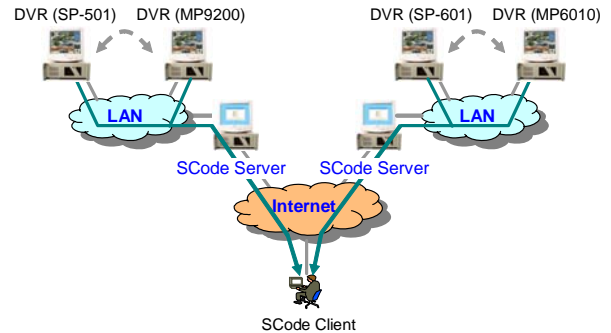


Support Web Page

It is allowed to build SCode IE Viewer into Web page.

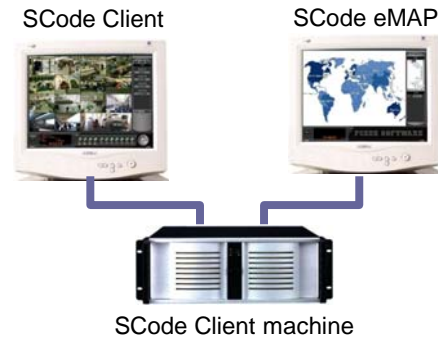
Access Different Types of SCode DVRs

- Allows to integrate SP-6204/SP-6208/SP6216, SP-501, SP-502, SP601, MP-9116, MP-9200, and MP-6010 DVR in one network.
- Allows to view SP-6204/SP-6208/SP6216, SP-501, SP-502, SP601, MP-9116, MP-9200, and MP-6010 DVR, simultaneously.



Support Dual-Monitor

SCode Client program supports dual-monitor operation.



Operating System

- Support Windows XP, Window 2000.
- Support intel P3, P4 or other x86 CPU.
- Support DirectDraw and non-DirectDraw VGA card

