

SCode CMS (Central Monitoring System) V3.5.1 (SP-501 and MP-9200)

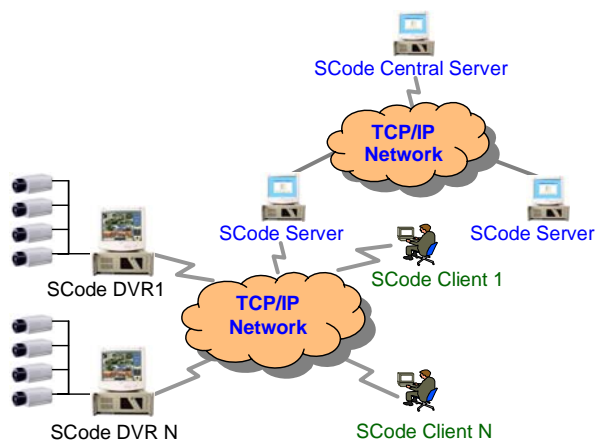


SCode CMS (Remote Monitoring System) provides one of the strongest networking capabilities in the current DVR market. Through existing data network structures, it can integrate stand alone SCode DVRs into large video surveillance networks. Its powerful network features offer efficient tools to cope with the limitations of available communication bandwidths. In combination with having the SCode's highest compression technology in the world ready available, makes it possible to design a strategy for achievement of the highest possible fps transmission speed of video images through existing networks.

SCode CMS has 6 unites :

- 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

Basic Network Structure

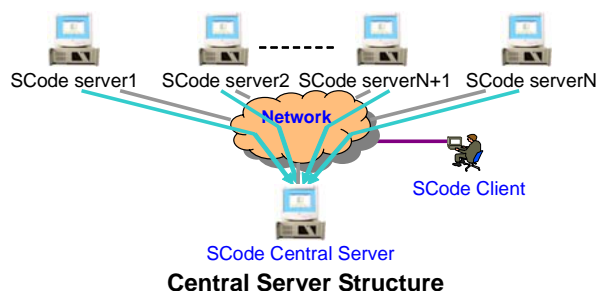
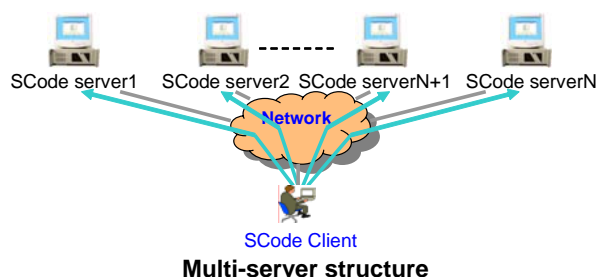


Technical Characteristic

Multi-server and Central-server Structure

The multi-server structure is an innovated design. Each **SCode Server** handles a regional network independently and can be linked with the **SCode Central Server** outwards. It provides stable network solutions for:

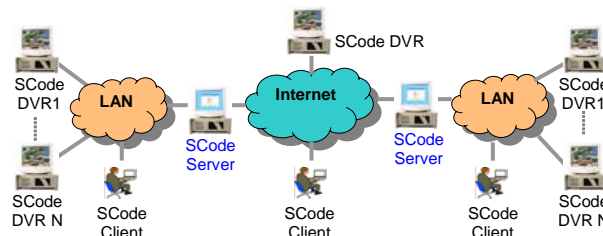
- Local monitoring and simultaneous remote centralized control.
- Allows for highly efficient SCode DVR network layouts to save communication bandwidth resources.



High Transparency in Network

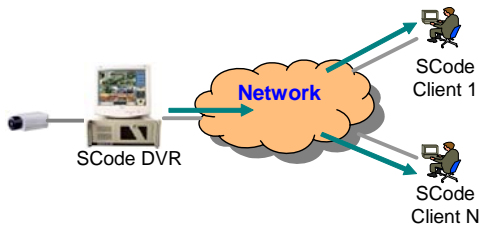
Remote SCode Clients can cross over to many different networks. SCode DVRs can have physical or virtual IP's.

- **SCode Clients** can be located behind NAT (router, Gateway, etc.)
- **SCode DVRs** located in a LAN are easily accessible from outside network.
- Both **SCode DVR** and **SCode Client** may use a static IP or a floating IP.



Communication Protocol

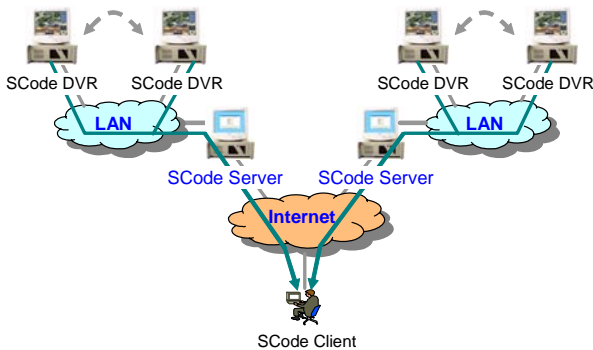
- UDP/IP mixed with TCP/IP protocols is used to solve the huge image transmission data rate during multiple remote SCode Clients accessing the same camera. Under UDP/IP, only one image data will be sent out of the SCode DVR. The SCode DVR does not need to duplicate the same image data and send a copy to each accessing remote observer. This feature reduces bandwidth loading in a dramatic manner.
- Due to the group broadcast protocol (UDP), remote SCode Clients will get different image receiving frame rates depending on their own bandwidth. The highest bandwidth owner gets the better image frame rate when multiple remote observers are accessing the same camera.



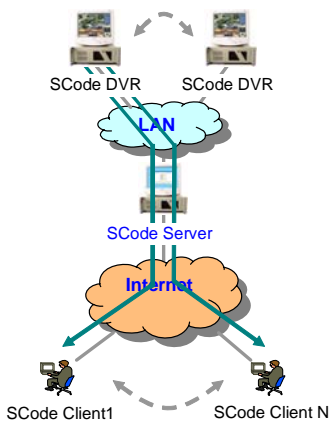
Multi-Point Control Capability

This allows remote SCode Clients to monitor and control different SCode DVRs that are located in different SCode Server networks.

- One SCode Client can monitor and control multiple SCode DVRs located in different networks, at the same time.



- One SCode DVR can be monitored and controlled by multiple remote SCode Clients from different networks, simultaneously.



Software Features

Network Structure

- **Unique Client-Server network structure**
One SCode Server can manage lots of SCode DVR machine. SCode Client can link with all SCode DVRs immediately, simple by visiting a SCode server.
- **Multi-Server network structure**
Using the multi-server network structure, one SCode Client can link to multiple SCode Servers, simultaneously.
- **Central-Server network structure**
All SCode Servers can link to one SCode Central Server for construction of large surveillance networks.

Communication Protocol

Use TCP/IP and UDP/IP protocol.

Network Transparency

- **Cross NAT**
Can pass through the NAT devices.
- **Cross different network**
Can access different DVR located in different network.
- **Support Static/Floating IP**
SCode DVR and Client can use static or floating IP.
- **Support Physic/Virtual IP**
SCode DVR and Client can use physic or virtual IP.
- **Support Domain Name Access**
SCode server can be accessed by the domain name.

Image Transmission

Due to the high compression rate of **SCode**, it is possible for SCode CMS to send 50 fps in 512 Kb bandwidth (In CIF resolution).

- **Image compression**
Use MPEG4 and xVid.
- **Single-channel image transmission rate**
Allow to send 1 ~ 30 fps (PAL) or 1 ~ 30 fps (NTSC) per channel.
- **System image transmission rate**
Max. image transmission frame of one **SCode DVR** :
PAL=300 fps or NTSC = 360 fps (CIF resolution)
- **Image resolution (pixel2)**
PAL = 352x288, 704x288, 528x360, 640x480, 720x480
NTSC = 352x240, 704x240, 528x360, 640x480, 704x480

Remote Access

- **Easy access the remote DVR**
Easy and fast operations for accessing remote DVRs, No complex settings of communication ports needed.
- **Multi-point access capability**
SCode DVRs allow to be accessed by multiple SCode Clients from different networks, simultaneously. SCode Clients can access different SCode DVRs in different SCode Servers networks, simultaneously.
- **Auto-link with SCode Server**
SCode DVR and SCode Client can link with an appointed SCode Server after power on.

■ Auto-link with SCode Central Server

SCode Server can link to SCode Central Server after power on.

■ Auto re-link

SCode DVR and SCode Client can re-link to SCode Server, when link is broken.

When link between SCode Server and SCode Central Server is broken, SCode Server will re-link to SCode Central Server automatically.

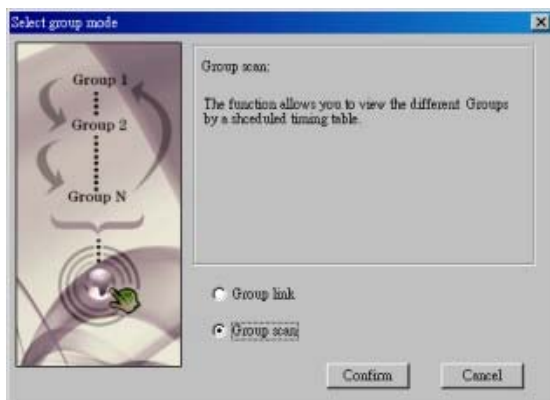


■ Group link

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 linking status while in monitoring the remote cameras. It can reduce the setting procedures of the group link.



■ Group scan

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

■ 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.

■ Auto update the linking status

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

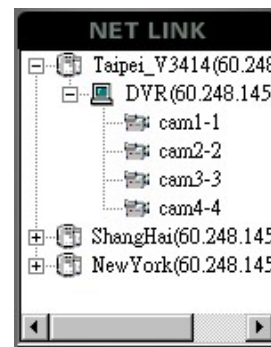


Image Monitoring

■ 64-channel video monitoring

Allows to monitor 1 ~ 64 living videos from different DVRs located in different networks, simultaneously.

■ Monitor window

Provides 8 kind of split modes : 1, 4, 9, 16, 25, 36, 49, and 64 split windows.

■ Access an appointed camera

The user can access any appointed camera, one by one, till all the 64 channels are filled.

■ Access all camera of one DVR machine

The user can visit all cameras of one DVR machine at one-click.

■ Auto speed up the transmission rate

While one image window is enlarges, the system can increase this window's speed to a preset rate.

■ Support non-DirectDraw VGA card

Remote Audio Monitoring

Support audio monitoring and recording through network communications.

Remote Audio Broadcast

SCode client can broadcast the voice to any or all remote DVRs.

Remote Alarm Sound Playback

SCode Clients can request remote SCode DVRs to play an alarm sound that is stored in the remote DVR's sound bank.

Remote Control

■ Adjust the transmitted frame speed

SCode Clients can change the transmitted fps speed of each independent DVR camera.

■ Adjust the transmitted image quality

SCode Clients can change the transmitted image quality of each independent DVR camera.

■ Adjust the camera signal

SCode Clients can adjust the camera's video signal (brightness, saturation, contrast, and hue) remotely.

Remote PTZ Control

Users can control camera plates or speed domes, remotely.

Plate control : Auto, Pan, Tilt

Lens control : Zoom, Focus, Light

Speed control : Zoom, Pan Tilt

External control : Wiper, Heater, Fan, Lighter

Remote I/O Control

The user can remotely control the I/O controller.

Remote Data Retrieve

■ Remote file download

Downloads the video files from remote DVR.

■ Remote information check

Users can check remote DVR information:
System operation history, System login history, Alarm log history.

■ Remote device information check

SCode Clients can retrieve camera device information from remote DVRs.

Remote System Setup

■ Remote user management

Change the user setups of remote DVRs.

■ Remote auto function setup

Change the auto functions of remote DVRs.

■ Remote recording schedule setup

Manage recording schedules of remote DVRs.

■ Remote alarm schedule setup

Change alarm schedules of remote DVRs.

■ Remote alarm setup

Change alarm settings of remote DVRs.

Remote Alarm

If SCode DVRs detect an alarm event, it can inform remote SCode Clients by:

■ Live video alarm

SCode Clients can automatically receive and store the live videos sent by a remote DVR.

■ Audio alarm

When SCode Clients receive a remote alarm from the remote DVR, it can play a preset alarm sound.

■ LED alarm

When SCode Clients receive a remote alarm, it can turn on an alarm LED to signal the user.

■ Alarm log

When SCode Clients receive a remote alarm, it will write this alarm event into an alarm log table.

Video Recording

Allow to record the incoming video while in monitoring.

Playback

Allow to play the remote download video files and the video file recorded by SCode Client.

Snapshot

Take pictures from the incoming video while in monitoring.

System Record Check

Allow 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 protect modes avoid unauthorized access at the local site.

■ Remote password protection

If users want to access a remote DVR, the remote DVR will check their 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 by manually.

SCode Server Features

■ Control the bandwidth

SCode Server can manage the communication bandwidth.

■ Auto-execute Web Server

Can run Web server program automatically, after SCode server executed ◦

■ Auto-link to SCode Central server

Can link to the SCode Central Server automatically, after SCode server executed ◦

■ Auto re-link to SCode Central server

Can link to the SCode Central Server automatically, after the network is broken ◦

■ Manage the linking user

SCode Server can view, manage, and limit the linking of the remote SCode Client, DVR machine, and Server.

■ Check the linking history

The user can check the linking records and print or export the records.

The user can also set the storage days of the history records.



Remote eMAP

With the remote eMAP function, users can locate where the cameras are installed; check its working status and access the cameras from there.

■ Multi-layer map

It allows the user to build a multiple layer e-map (256 layers). The background map is a BMP format picture.

■ Customized device icon

The system allows to use custom device icons shown on the map.

■ Access modes

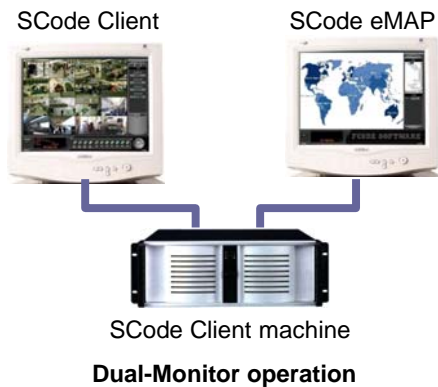
Users can access a device by clicking the icon on the map or by clicking the name from the tree table.

■ Show working status

The icon will change its symbol if the device changes its working status.

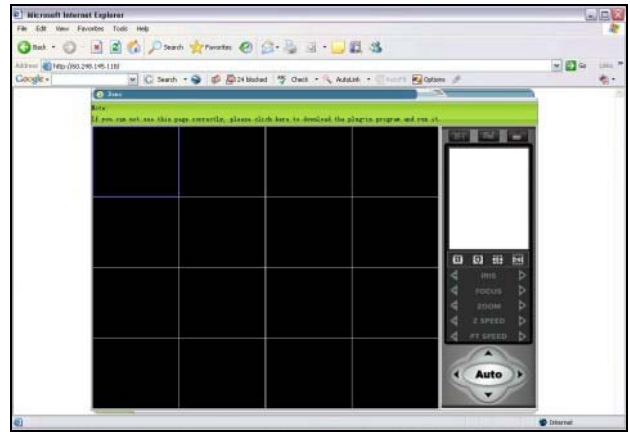
■ Independent image window

The user can view a camera's image by clicking its icon. And, an independent image window will pop up and show this camera's image.



Support Dual-Monitor Operation

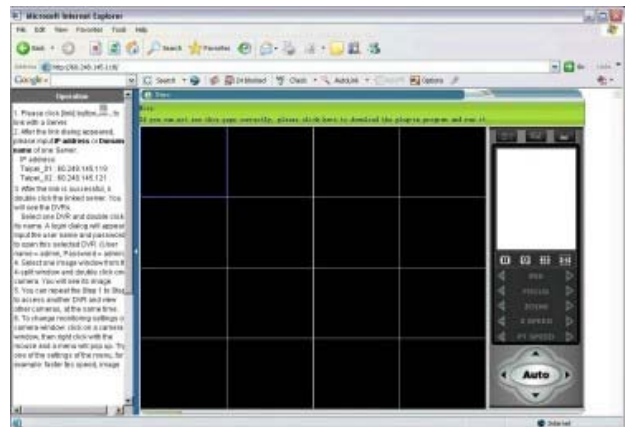
It provides to use 2 monitors to operate the SCode Client program and eMAP at the same time.



Support IE Browser

Users can access remote DVRs by IE browser.

- Allows to access SCode servers by IP address or domain name.
- Allows to view 16 cameras located in different DVRs
- Allows to access multiple-DVRs
- Allows to access multiple servers
- Allows to adjust transfer rate and image quality
- Remote password check



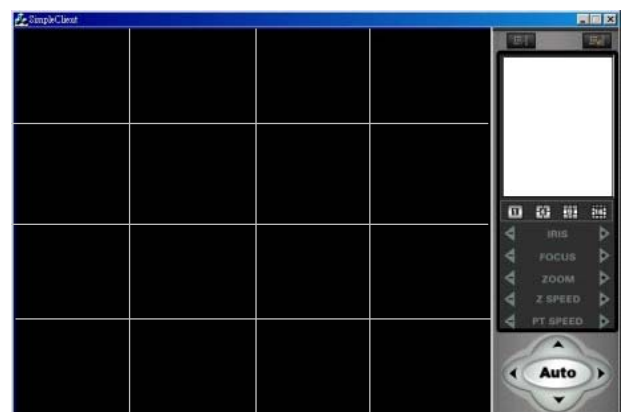
Support Web Page

It is possible to build SCode IE Viewer on a Web page. In this way, remote users can view the camera's image through the internet.

- Provide OCX file
- Pass the digital signature approval

SCode Simple Client

Provide a free simple version of SCode Client program to users



SCode Server Features

■ Provide communication bandwidth management

SCode server can arrange the usage of the communication bandwidth.

■ Auto lunch Web server

If the user want to view the remote SCode DVR by IE viewer, a Web server is necessary. SCode Server can auto lunch a Web Server to reduce the executing trouble.

■ Auto link to SCode Central Server

SCode Server can link with SCode Central Server automatically

■ Auto re-link

If the network gets trouble and terminate the communication, SCode Server can re-link to SCode Central server automatically.

■ User management

SCode Server can monitor and manage the linking status and the allowed number of SCode DVR and SCode Client.

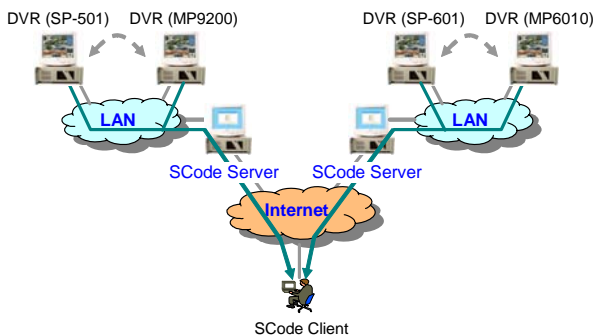
■ View the history record of linking information

The user can view, print and output the history of the linking record.

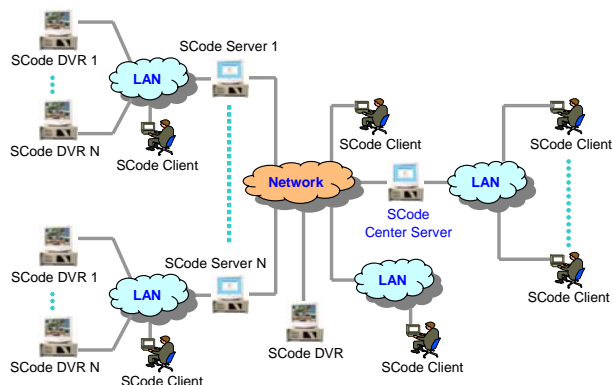
Access Different Types of SCode DVRs

■ 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.



Example



Operating System

- Supports Windows XP, Window 2000.
- Supports intel P3, P4, and x86 CPU.
- Supports direct draw and non- direct draw VGA cards.