

# AP-SDRS2000 RTSP based HD/D1 NVR Storage Server Solution



IP Camera Interworking



**AddPac**

**AddPac Technology**

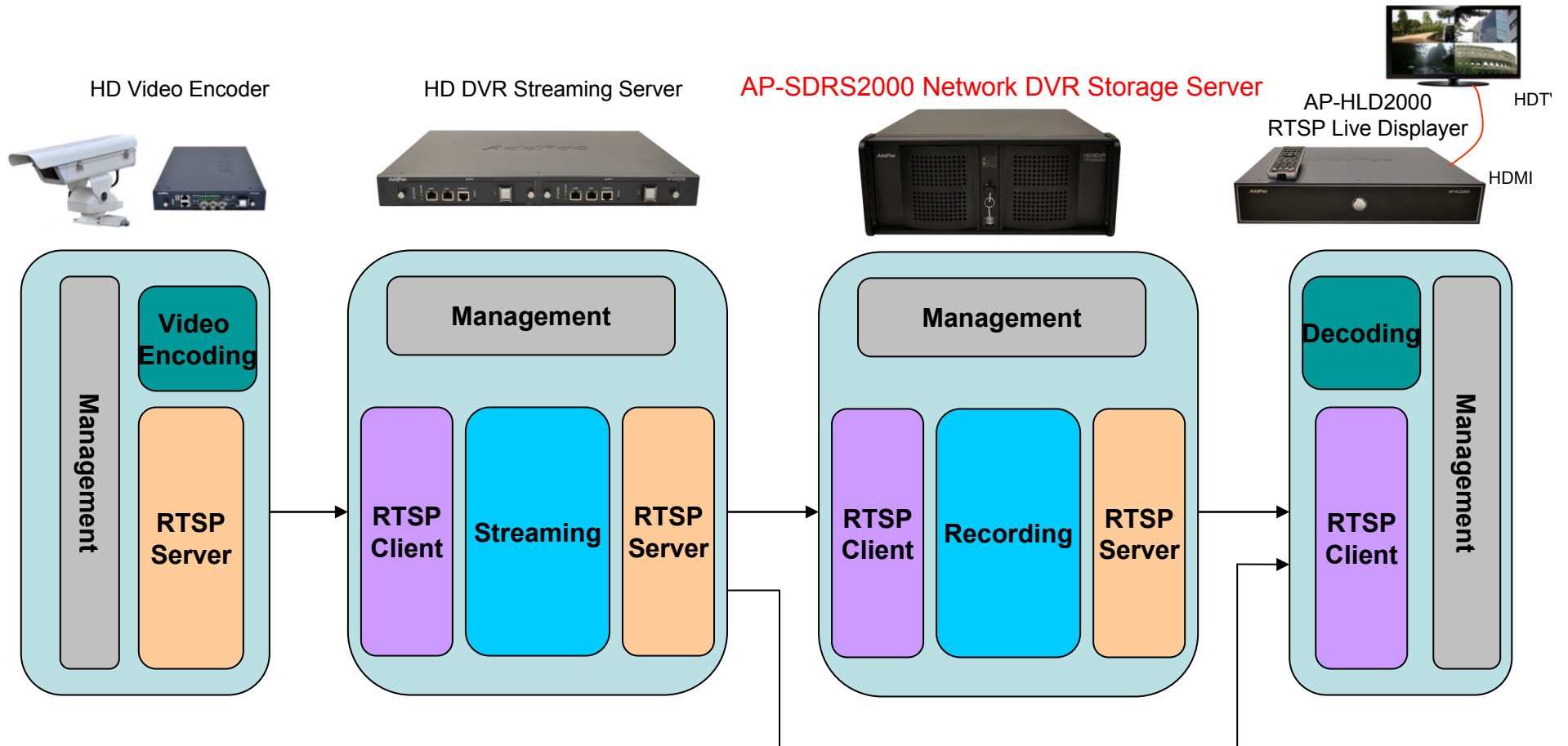
Sales and Marketing

# Contents

- HD NVR Storage Server Protocol Block Diagram
  - Medium & Large Scale NVR Solution
  - Small Scale NVR Solution
- Basic RTSP Message Flow
- IP Camera Interworking (AXIS, SAMSUNG, CNB, etc)
  - IP Camera Interworking Diagrams
  - IP Camera Interworking Test
- HD NVR Storage Solution Component Features
  - AP-SDRS2000 HD NVR Storage Server
  - Smart DVR Manager
  - Smart DVR Media Manager

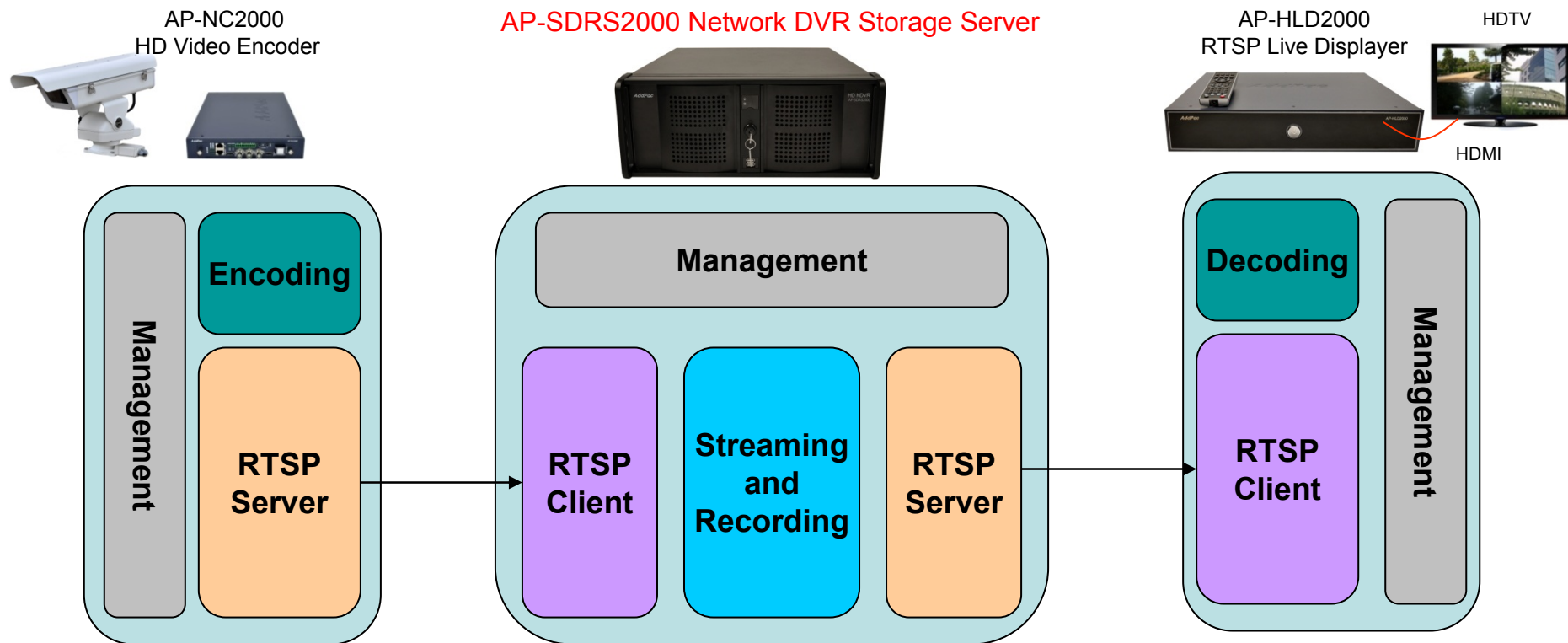
# NVR Storage Server Protocol Block Diagram

## Medium & Large Scale Network DVR Solution

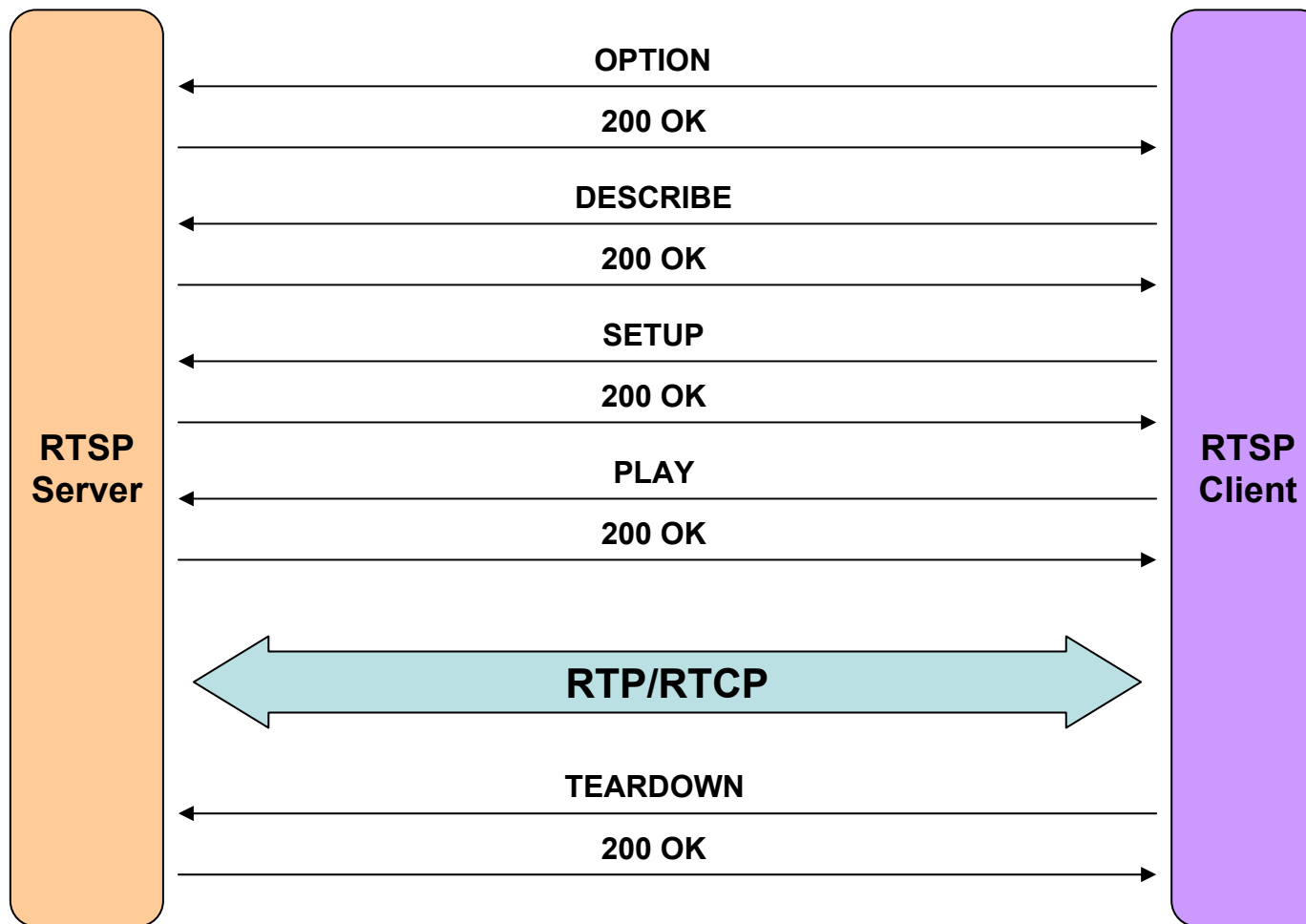


# NVR Storage Server Protocol Block Diagram

## Small Scale Network DVR Solution (All in One)



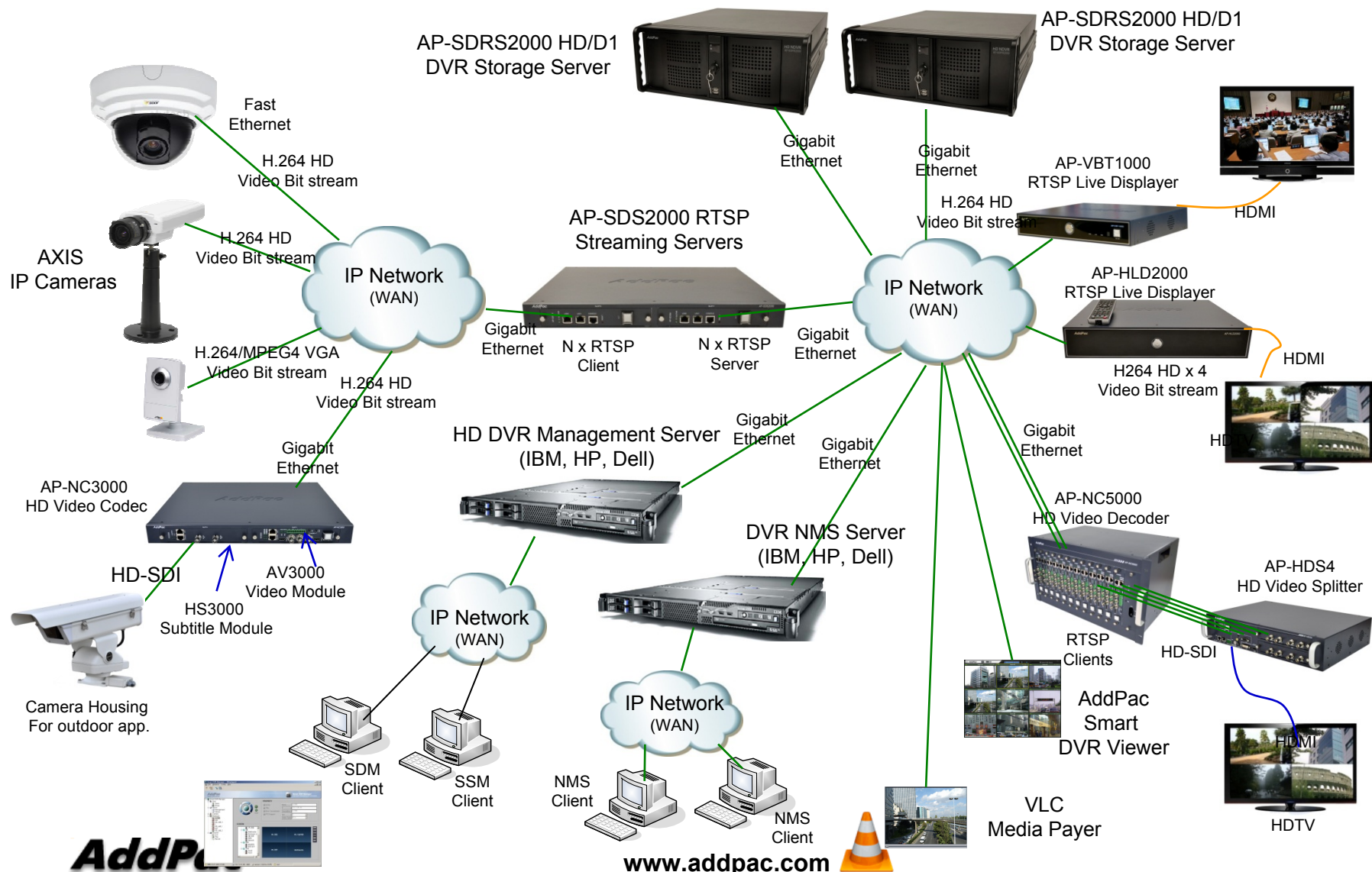
# Basic RTSP Message Flow



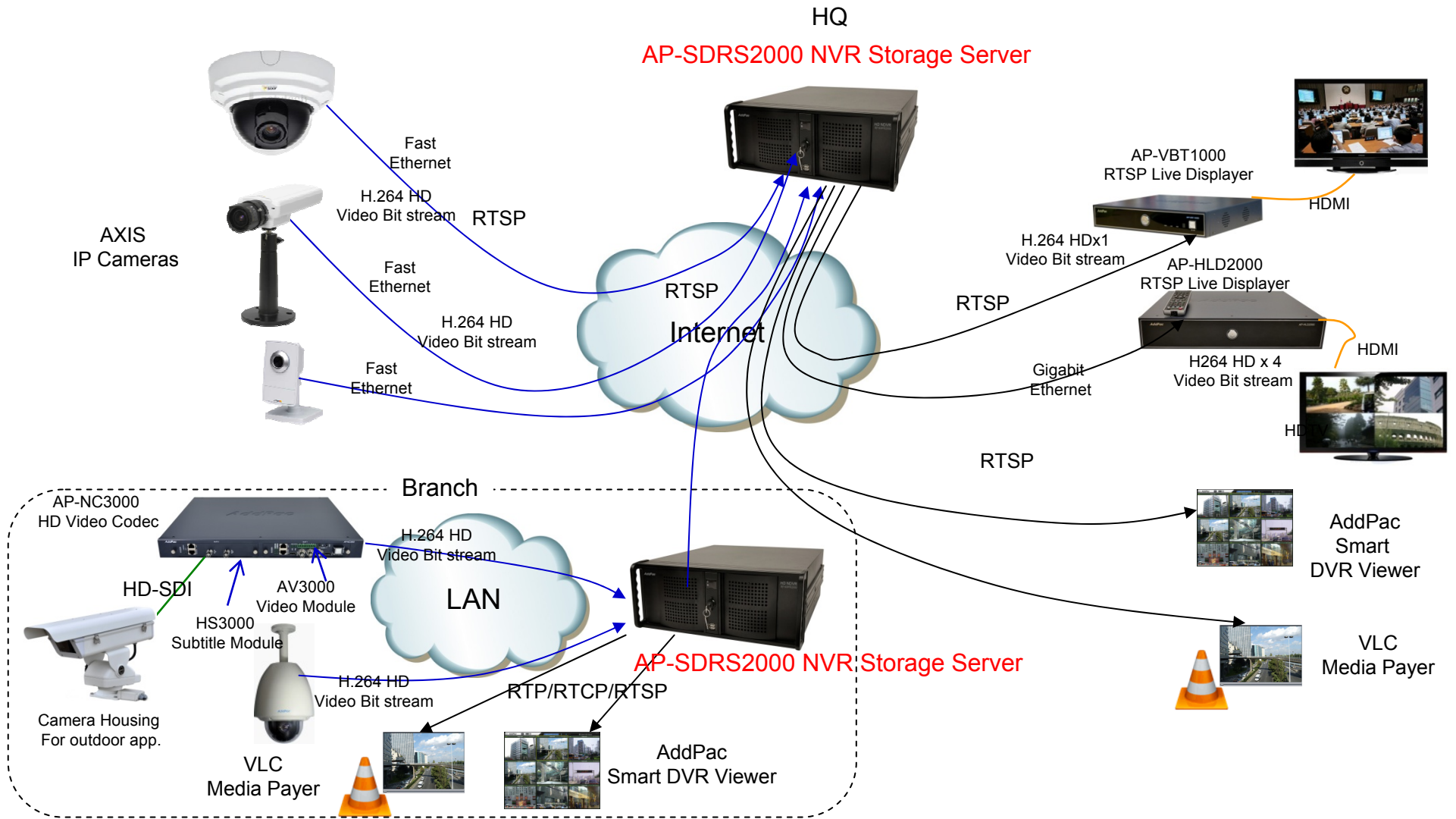


# IP Camera Interworking

# IP Camera Interworking Diagram (Large Scale)






# IP Camera Interworking Diagram (Small Scale)





# IP Cameras (AXIS)

AP-SDRS2000 HD NVR Storage Server

AXIS M10 Series	M1011 VGA IP Camera H.264, MPEG-4 Interworking Test	
AXIS P13 Series	P1344 HD IP Camera H.264/Audio Interworking Test	
AXIS P33 Series	P3344 HD IP Camera H.264/Audio Interworking Test	

# IP Cameras (SAMSUNG)

AP-SDRS2000 HD NVR Storage Server



SNB-5000 1.3  
Megapixel HD  
Network Camera

1.3MP CMOS Sensor  
HD(720P) Support  
H.264 Interworking Test



# IP Cameras (CNB)

AP-SDRS2000 HD NVR Storage Server

IDP4000VR	Hybrid IP D&N IR Dome Camera Progressive 1/4" CCD sensor Max. 640(H) x 480(V) VGA H.264	
IDC4050VR	HD IP Mega-pixel TDN Dome Camera DC Iris Vari-focal Mega Pixel Lens (f=3~10mm) 1/3" Progressive CMOS Sensor Max. Full HD(1920x1080)	



# HD NVR Storage Solution Component Features



# AP-SDRS2000 HD NVR Storage Server

# Product Overview

## AP-SDRS2000 HD NVR Storage Server

- High-Performance HD/D1 Network DVR Features
- Linux Operating System (Option : Window Version)
- H.264 Video Codec BP/MP/HP
- Full HD, HD, D1 Video Resolution Support
- HD Video Recording and Streaming Service
- Smart DVR Viewer Support (MS-Window S/W)
- Smart DVR Manager Support (MS-Window S/W)
- File Back Manager Support (MS-Window S/W)
- Powerful Management and User Friendly Features
- High-performance Audio and Video Service
- Firmware Upgradeable Architecture
- Up to 4 x 3.5Inch Hard Disk (SATA Type, 2Tera Byte Support)
- One(1) DVD Writer for Video File Backup
- One(1) 10/100/1000Mbps Gigabit Ethernet Interface
- USB Interface Support (Front Side, Back Side)

# Hardware Specification

AP-SDRS2000 HD NVR Storage Server

High End  
Processor

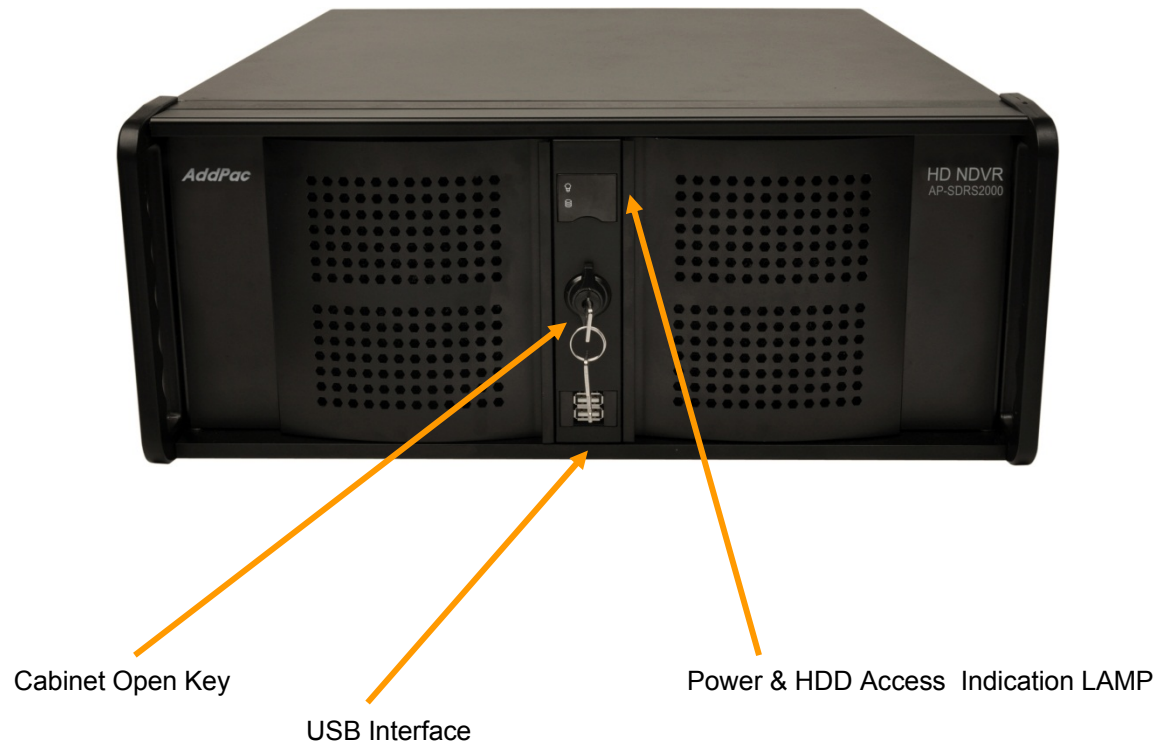
- High Performance Computing Power
- Main Chassis
  - Network Interface
    - One(1) 10/100/1000Mbps Fast Ethernet
  - Video Output Interface
    - HDMI, DVI,RGB Video Output
  - USB 2.0 Interfaces for Mouse, Keyboard, etc
  - One(1) DVD Writer for Video File Backup
  - Up to Four(4) Hard Disk

# Hardware Specification

AP-SDRS2000 HD NVR Storage Server

High End  
Processor

AP-SDRS2000 Front Side



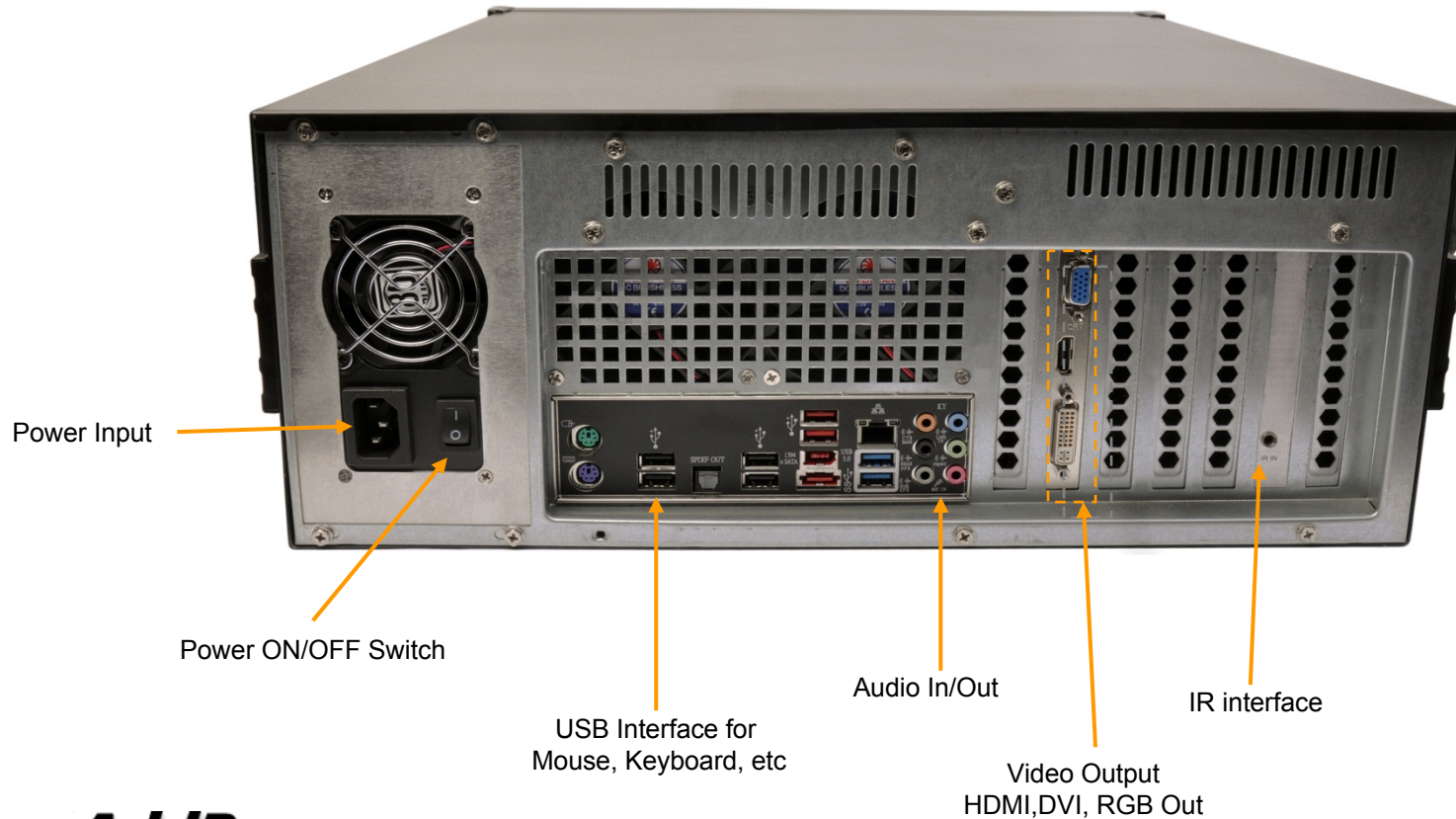


# Hardware Specification

AP-SDRS2000 HD NVR Storage Server

High End Processor

AP-SDRS2000 Back Side



# HD NVR Storage Server Features

- Encoder / Decoder Interface
  - UDP/RTP
  - RTSP (Real Time Streaming Protocol)
- Recording
  - Manual Recording
  - Schedule Based Recording
  - Recording Monitoring
  - Recording Media File Maintenance
- Management
  - Web Based Management
  - Smart DVR Manager (SDM)
  - SNMP (Simple Network Management Protocol)



# Smart DVR Manager

# Smart DVR Manager Features

- System Management
  - User, Group Management
  - Camera Management
  - Schedule Management
- Recording
  - Recording Start/Stop
  - Recording Media File Searching and Maintenance
  - File Download and Excel Exporting
- Monitoring
  - System Resource Monitoring (CPU, Memory, HDD and etc)
  - Live Session Monitoring
  - Media File Play Session Monitoring

# Smart DVR Manager : Main Layout

The screenshot shows the Smart DVR Manager web interface. The main content area is divided into several sections:

- Camera Searching:** A search bar at the top left of the main content area.
- System User configuration:** A section containing a "Server Port" field set to "8020".
- Client Session:** A section containing two tables: "Viewer List" (showing 10 User Licensed) and "Manager List" (showing 5 User Licensed).
- Camera List:** A table listing cameras, with "3층창문\_HD" and "옥상\_HD" visible.
- Session Monitoring:** A section for monitoring sessions, including "Live", "Play", "Record", and "Sequence" options.

The left sidebar shows a tree view of the system structure, including "User", "Server", "Management", "Diagnostic", "Record", "Stream", "Camera", "Relay", and "Session".

User	IP
root	172.16.1.14
root	172.16.1.14
root	172.16.34.2

Bottom status bar: 2010-03-12 오후 3:42:59 | 172.16.14.113 : 8020 | Version 2.1.3723 | root | Viewer : 0 Manager : 3

# Smart DVR Manager : Recording File Searching

The screenshot displays the Smart DVR Manager web interface. On the left is a navigation tree for IP address 172.16.14.113, with the 'Record' option selected. The main area shows a 'Record History' table with search filters and a table of results. Three yellow callout boxes highlight key features: 'Recording File Download' (pointing to a download icon), 'Excel Exporting' (pointing to an Excel icon), and 'Recording Media Searching Result' (pointing to the table). A fourth box, 'Recording Media Management', points to the 'Record' menu item in the navigation tree.

CameraNa...	StartTime	EndTime	Duration	URL	Camera Gr...	User ID	Description	Video Size	FPS
3층창문_HD	2010-03-1...	2010-03-1...	00:00:00	file/1001v...	/	root	no contents	1280X720	30
3층창문_HD	2010-03-1...	2010-03-1...	00:00:10	file/1001v...	/	root	no contents	1280X720	30
3층창문_HD	2010-03-1...	2010-03-1...	00:00:39	file/1001v...	/	root	no contents	1280X720	30

Total 3 results found.

# Smart DVR Manager : Advanced Recording Searching

Smart DVR Manager

File Tool Configuration Help

Smart DVR Recording Server

Advanced Searching

Record History

CameraNa...	StartTime	EndTime	Duration	URL
목상_HD	2010-03-1...	2010-03-1...	00:00:00	file/100
목상_HD	2010-03-1...	2010-03-1...	00:00:10	file/100
목상_HD	2010-03-1...	2010-03-1...	00:00:39	file/100

Total 3 results found.

2010-03-12 오후 3:44:48 | 172.16.14.113 : 8020 | Version 2.1.3723 | root | Group : 0 Camera : 2 (Active : 2) Seq : 0

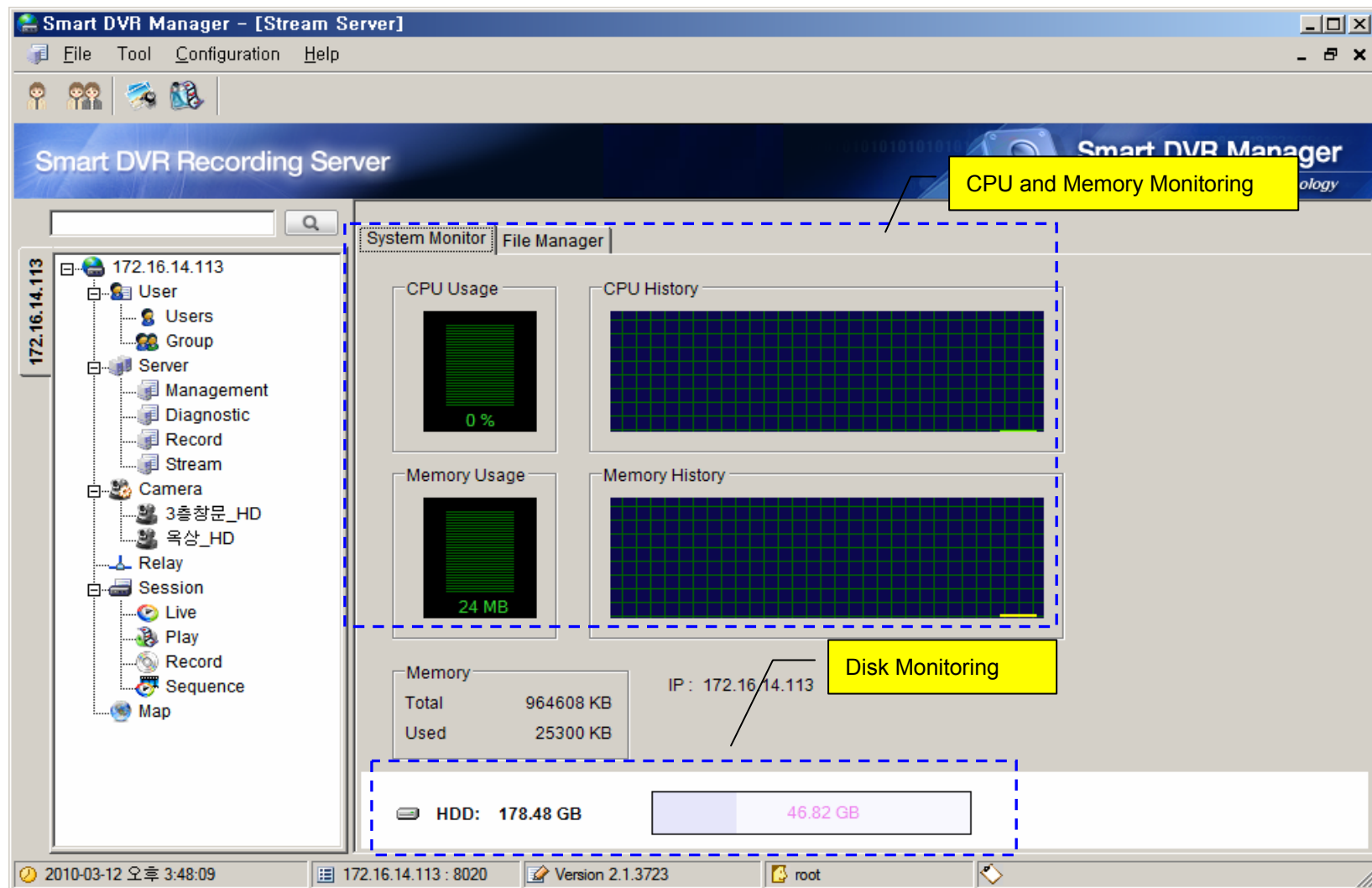
Advanced Searching Menu

Advanced Searching Rules

Selected Searching Rule Clear

Searching Rule All Clear

# Smart DVR Manager : System Monitoring



The screenshot displays the 'Smart DVR Manager - [Stream Server]' application window. The interface is divided into several sections:

- System Monitor:** This section is highlighted with a blue dashed box and contains four monitoring panels:
  - CPU Usage:** A gauge showing 0% usage.
  - CPU History:** A line graph showing CPU usage over time.
  - Memory Usage:** A gauge showing 24 MB usage.
  - Memory History:** A line graph showing memory usage over time.
- Disk Monitoring:** A yellow callout box points to the 'HDD: 178.48 GB' section, which includes a progress bar showing 46.82 GB used.
- System Information:** A table showing memory statistics:

Memory	Total	Used
	964608 KB	25300 KB
- Navigation:** A tree view on the left shows the server structure for IP 172.16.14.113, including folders for User, Server, Camera, and Session.
- Footer:** The status bar at the bottom shows the date and time (2010-03-12 오후 3:48:09), IP address (172.16.14.113 : 8020), version (Version 2.1.3723), and user (root).



# Smart DVR Manager : Schedule

**User Defined Schedule Lists**

**Delete Schedule**

**Weekly and Daily Time Schedule**

**Add Schedule**

**User define Special Day**

**Set Special Day using calendar**

Week	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Mon																								
Tue																								
Wed																								
Thu																								
Fri																								
Sat																								
Sun																								
Holiday																								

Special Day	Duration
2010-03-19	00:00-00:00
2010-03-28	00:00-00:00



# Smart DVR Media Manager

# Smart DVR Media Manager Features

- Recording History Searching
- Recording History Management
- Recording File Upload / Download
- Play Recording Media File
- Schedule Backup
- Event History

# Smart DVR Media Manager : Main Layout

**\*Searching and Download/Upload Function about selected Window : Camera Search, Update, File Searching, Download/Upload, Delete, Replay, etc**

**Recorded File Searching at Server using Group and Camera Tree**

카메라 이름	IP 주소	그룹	설명	녹화시간	진행시간	파일 이름	파일 크기
3층청문_HD	172.16.23.97	/	(null)	2010-03-12 15:4...	00:00:09	2010031206474...	8,890 KB
3층청문_HD	172.16.23.97	/	(null)	2010-03-12 11:4...	00:00:00	2010031202450...	214,637 KB
3층청문_HD	172.16.23.97	/	(null)	2010-03-12 10:0...	00:24:17	2010031201065...	1,424,769 KB
3층청문_HD	172.16.23.97	/	(null)	2010-03-12 10:0...	00:00:00	2010031201025...	90,190 KB
3층청문_HD	172.16.23.97	/	(null)	2010-03-11 17:3...	00:00:00	2010031108373...	286,144 KB

**Recorded File Display at Server**

**Recorded File Searching at Local PC using Group and Camera Tree**

카메라 이름	IP 주소	그룹	설명	녹화 시간	진행시간	파일 이름	파일 크기
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**Recorded File Display at Local PC**

2010-03-12 오후 5:21:49 version 1.0.3723 172.16.14.113 : 8020 root Scheduler waiting

# Smart DVR Media Manager : Recorded File Upload / Download

The screenshot displays the 'Smart DVR Manager' application window. A 'Download' dialog box is open, showing a list of files to be downloaded from a remote database. The dialog includes a progress bar for the file transfer and a section for file conversion from PMA to AVI format.

**Recorded File List for File Backup**  
: File Name, Recording Duration Time, File Size, File Backup Status

파일 이름	총 시간	파일 크기	녹화시간	상태
20100312064746.pma	00:00:09	8,890 KB	2010-03-12 15:4...	Done
20100312024507.pma	00:00:00	214,637 KB	2010-03-12 11:4...	Downlo...

**Display the File Transfer Progress Status for Backup (Server to Local PC)**

**Display File Conversion Progress Status**  
: PMA to AVI format (Option), etc

# Smart DVR Media Manager : Media Replay

The screenshot displays the AddPac Smart DVR Media Manager interface. A yellow callout box points to the VLC media player window, which is playing a recorded file. The VLC window title is "rtsp://172.16.14.113:554/file/1001/video1/20100311054337.pma - VLC 미디어 플레이어". The video content shows a busy street scene with cars and buildings, with Korean text overlaid: "경인선 도화-3 (전환중)".

**Recorded File Replay**  
- Recorded File Replay at Server or Local PC using media Player

카메라 이름	IP 주소	그룹	설명	녹화시간	진행시간	파일 이름	파일 크기
옥상_HD	172.17.120.99	/	(null)	2010-03-11 14:4...	00:00:39	2010031105433...	39,052 KB
옥상_HD	172.17.120.99	/	(null)	2010-03-11 14:2...	00:00:10	2010031105252...	10,298 KB
옥상_HD	172.17.120.99	/	(null)	2010-03-11 14:0...	00:00:00	2010031105015...	436 Byte

# Smart DVR Media Manager : Media File Attribute

The screenshot displays the Smart DVR Manager interface. A central dialog box titled '녹화파일 속성' (Recorded File Attribute) is open, showing the following details:

속성 이름	값
Record ID	3
Comment	No Comment
Camera GUID	745430054867
Camera Name	육상_HD
Camera Group	/
Camera URL	rtsp://172.16.14.113/1001/video1
Camera IP Address	172.17.120.99
Description	(null)
Video Codec	H264
Video Bandwidth	8192
Resolution	1280*720
FPS	30
Audio Codec	G711A
Audio Bandwidth	8192
SDP	
Start Time	2010-03-11 14:43:37
End Time	2010-03-11 14:44:16
Duration	00:00:39
File Directory	745430054867/2010/03/11/
File Name	20100311054337.pma
File Size	39,052 KB
File URL	file://1001/video1/20100311054337.p...
User	AddPac (root)

A yellow callout box with the text 'Recorded File Attribute Display' points to the dialog box. The background interface shows a tree view of 'Remote Database' and 'Local Database' with camera folders like '3층창문\_HD'. A table on the right lists recorded files with columns for '진행시간', '파일 이름', and '파일 크기'.



# Smart DVR Media Manager : Schedule

**Schedule Backup Configuration :**  
Scheduled Backup Configuration for Automatic File Backup  
- Start Time, Repetition (Daily, Weekly, Monthly)

**Schedule Backup Option**  
-Backup Duration, File Delete, File Conversion, Camera Setting, etc

스마트 DVR 미디어 관리 프로그램  
파일 관리 도움말  
AddPac Smart DVR Series  
11010101010  
Smart DVR Manager  
AddPac Technology  
서버 > 새로 고침  
Remote Database (172.16.14.113:6000)  
3층청문\_HD (5)  
육상\_HD (3)  
카메라 이미지 목록  
육상\_HD  
육상\_HD  
육상\_HD  
Local Database  
3층청문\_HD (2)  
육상\_HD (3)  
Records  
카메라 이미지 목록  
진행시간 파일 이름 파일 크기  
진행시간 파일 이름 파일 크기  
Records: 0 Search Constraints :  
2010-03-12 오후 5:28:00 version 1.0.3723 172.16.14.113 : 8020 root Scheduler waiting





# Thank you!

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