

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



***AddPac***

**AddPac Technology**

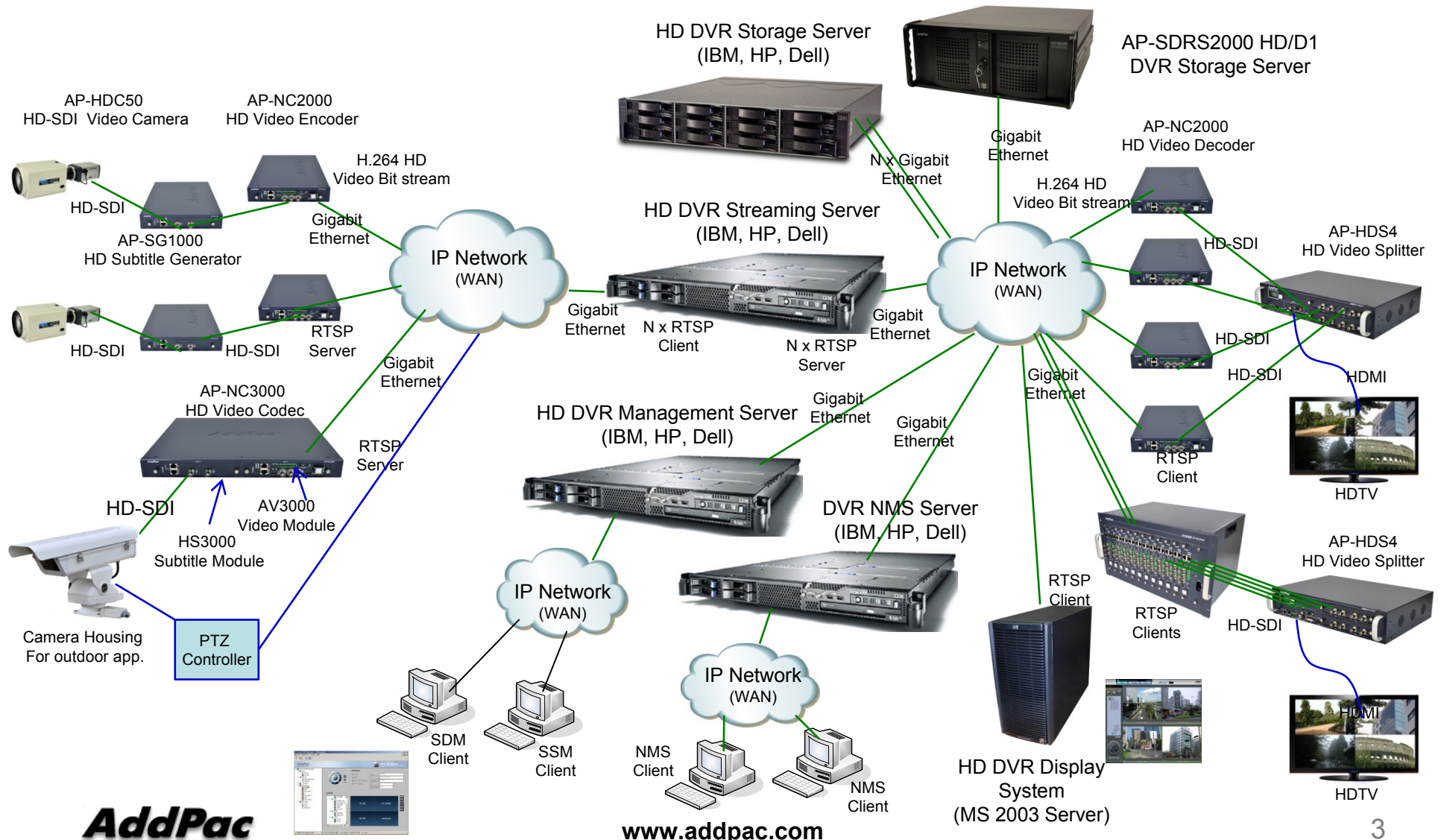
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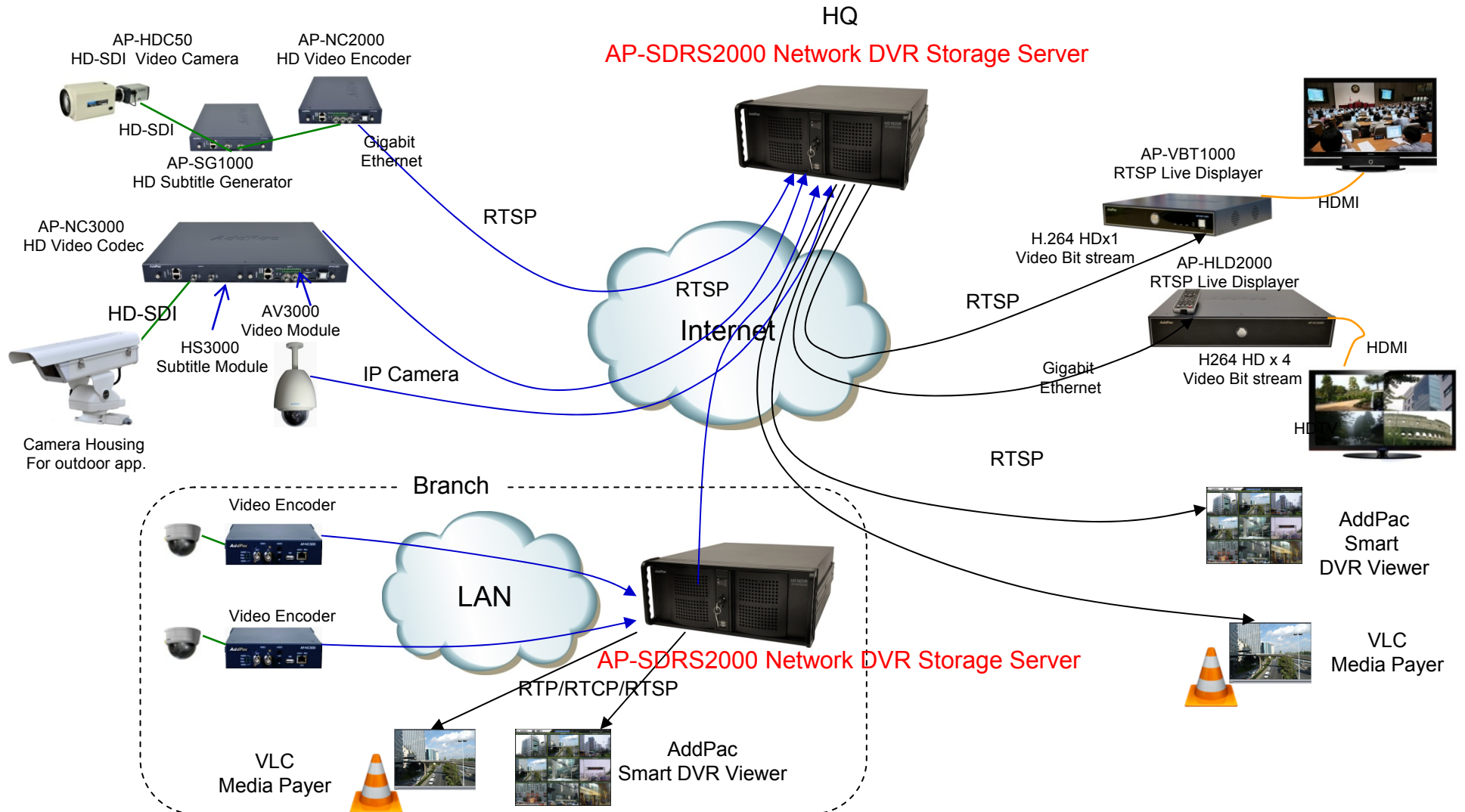
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# HD NVR Service Diagram

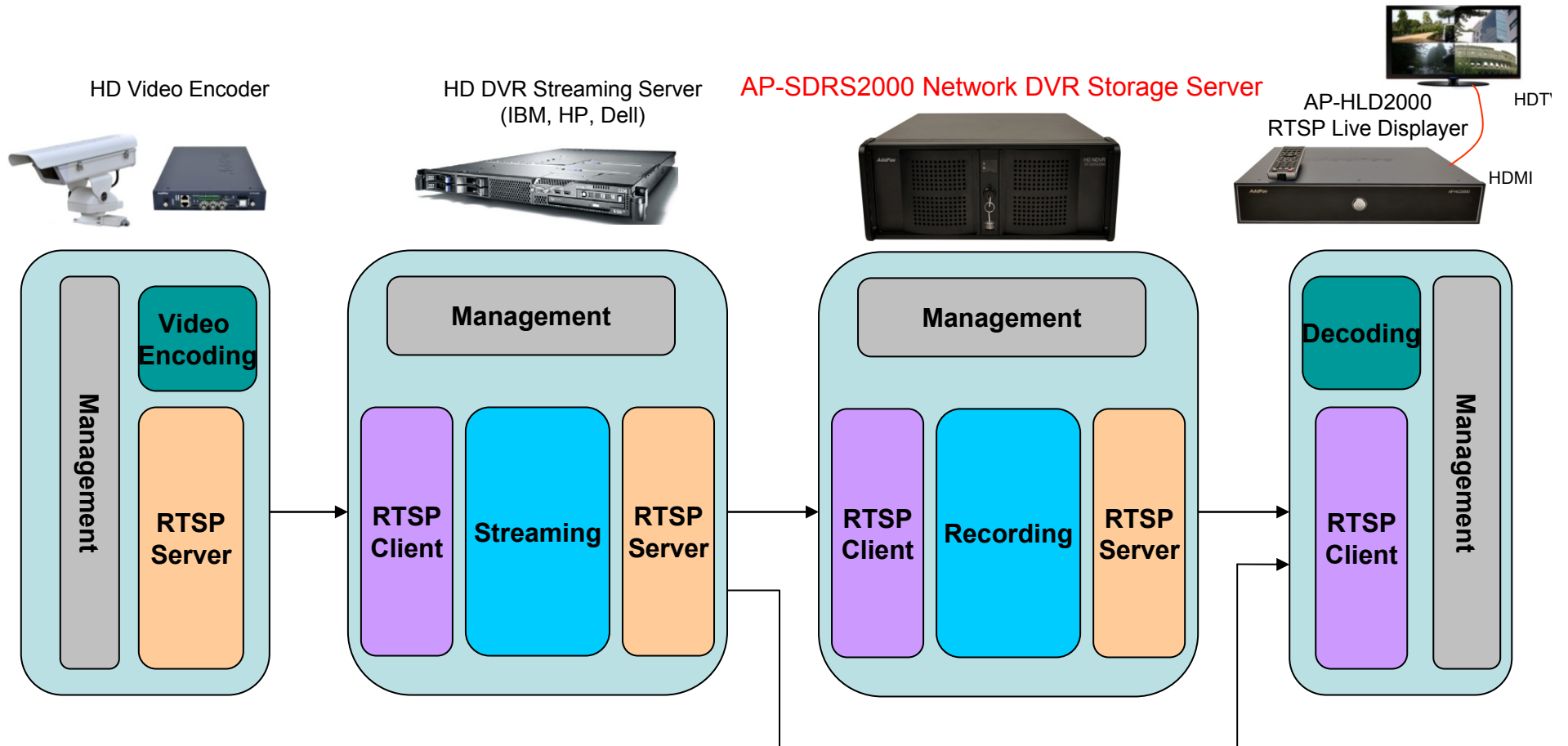


# HD NVR Storage Server Service Diagram



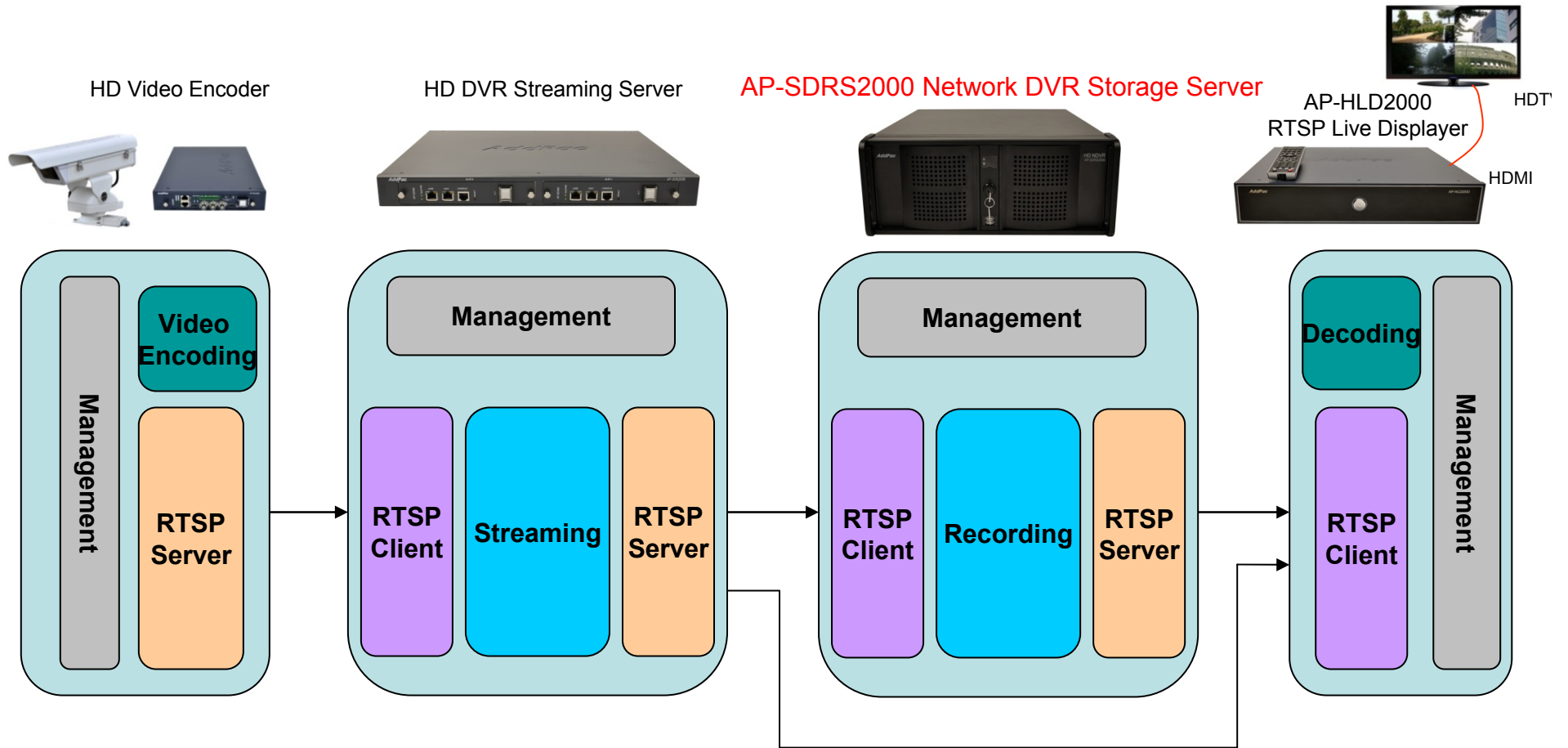
# NVR Storage Server Protocol Block Diagram

## Large Scale Network DVR Solution



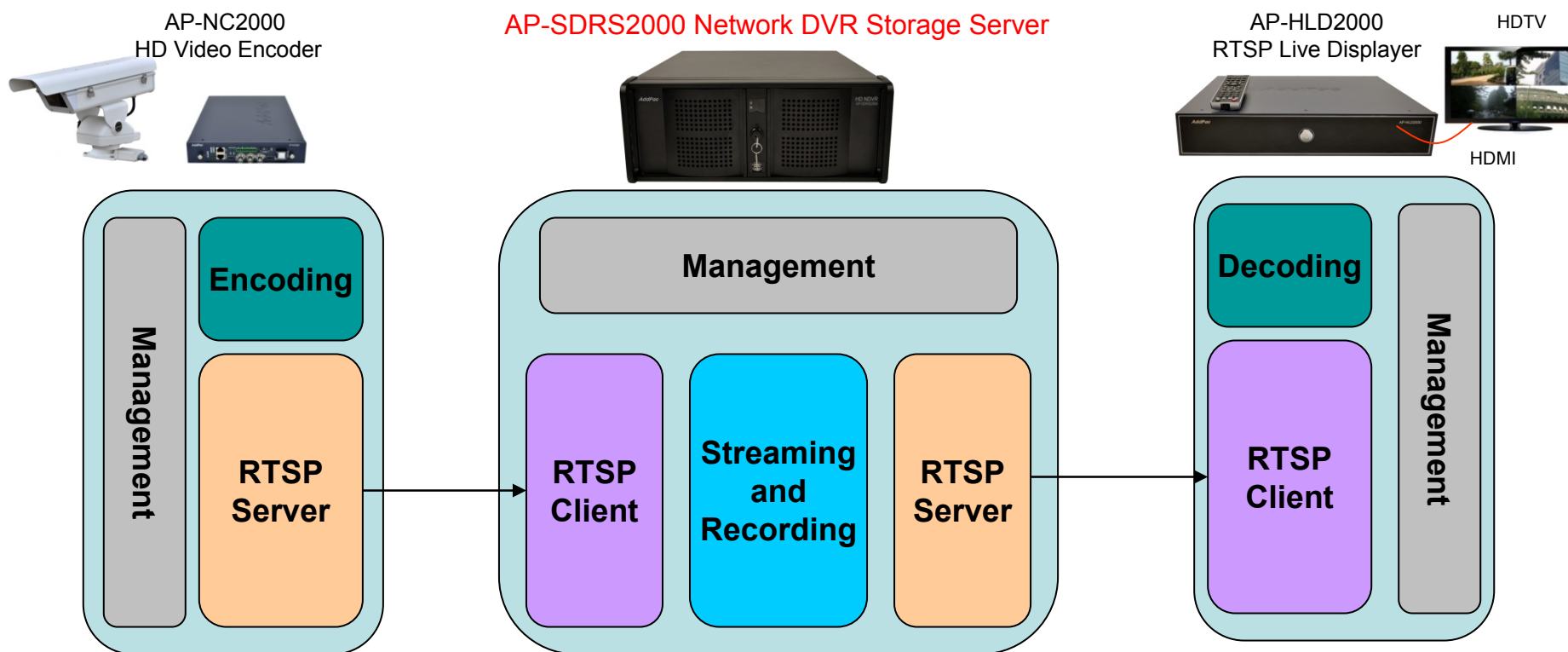
# NVR Storage Server Protocol Block Diagram

## Medium Scale Network DVR Solution

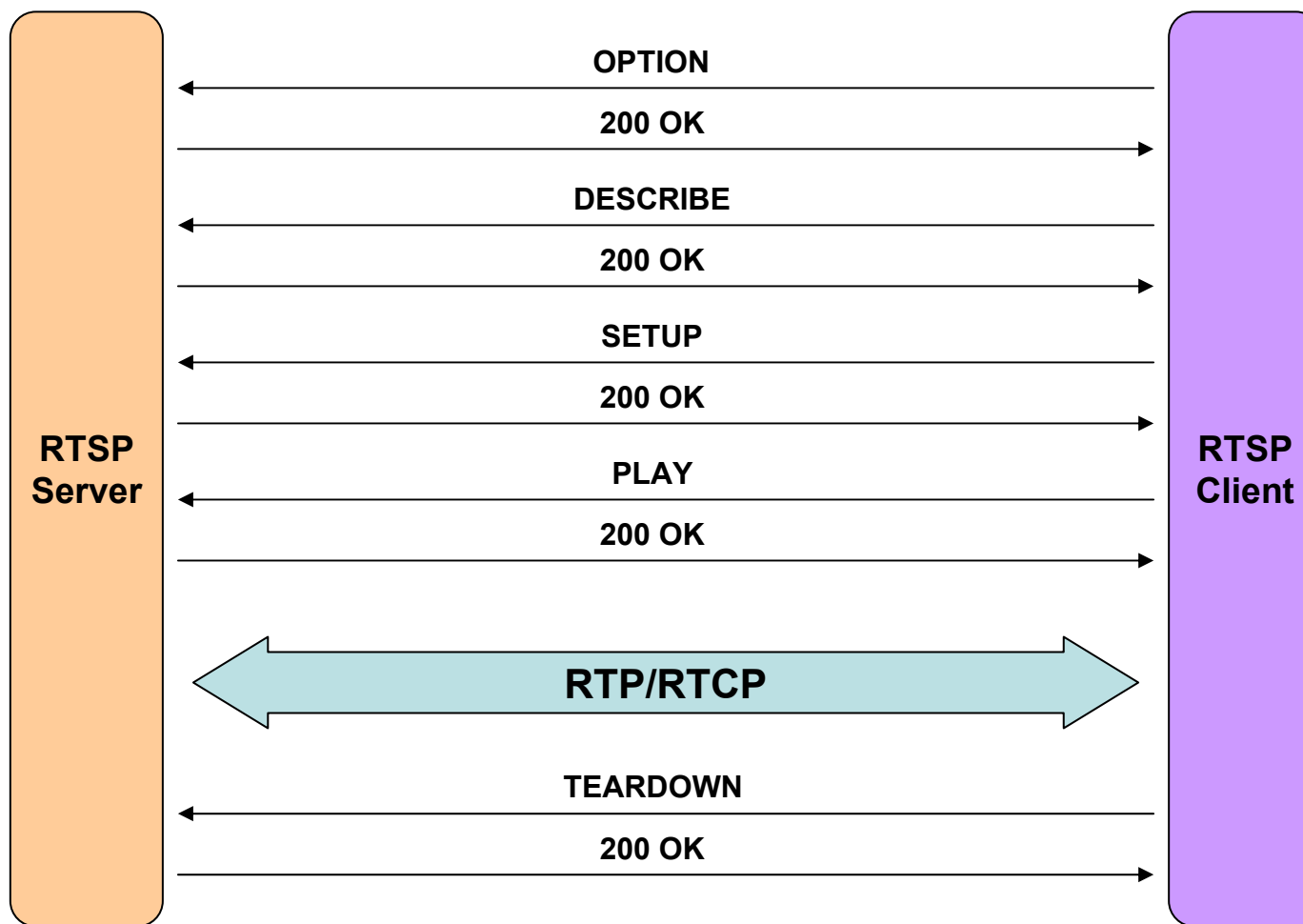


# NVR Storage Server Protocol Block Diagram

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



# Basic RTSP Message Flow







# 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

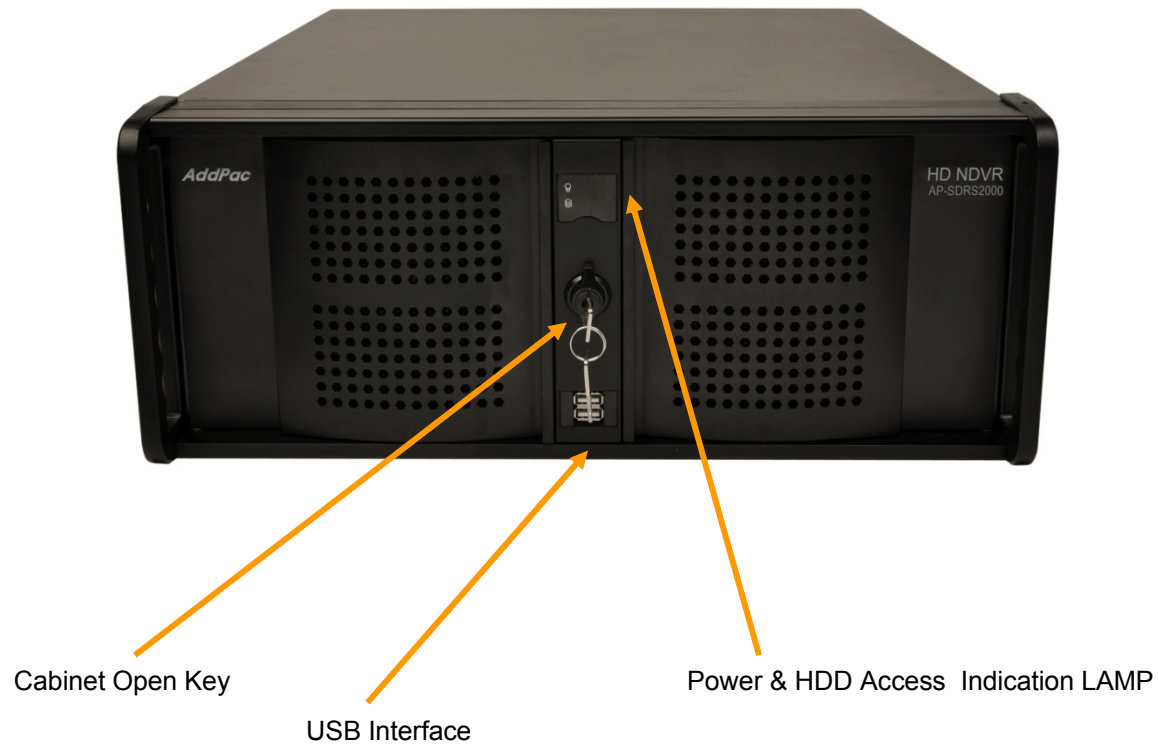
- High Performance Computing Power
- Main Chassis
  - Network Interface
    - One(1) 10/100/1000Mbps Fast Ethernet
  - Video Output Interface
    - HDMI, DVI,RGB Video Output
  - USB 2.0 Interfaces for Mouse, Keyboard, etc
  - One(1) DVD Writer for Video File Backup
  - Up to Four(4) Hard Disk

# Hardware Specification

AP-SDRS2000 HD NVR Storage Server

High End  
Processor

AP-SDRS2000 Front Side

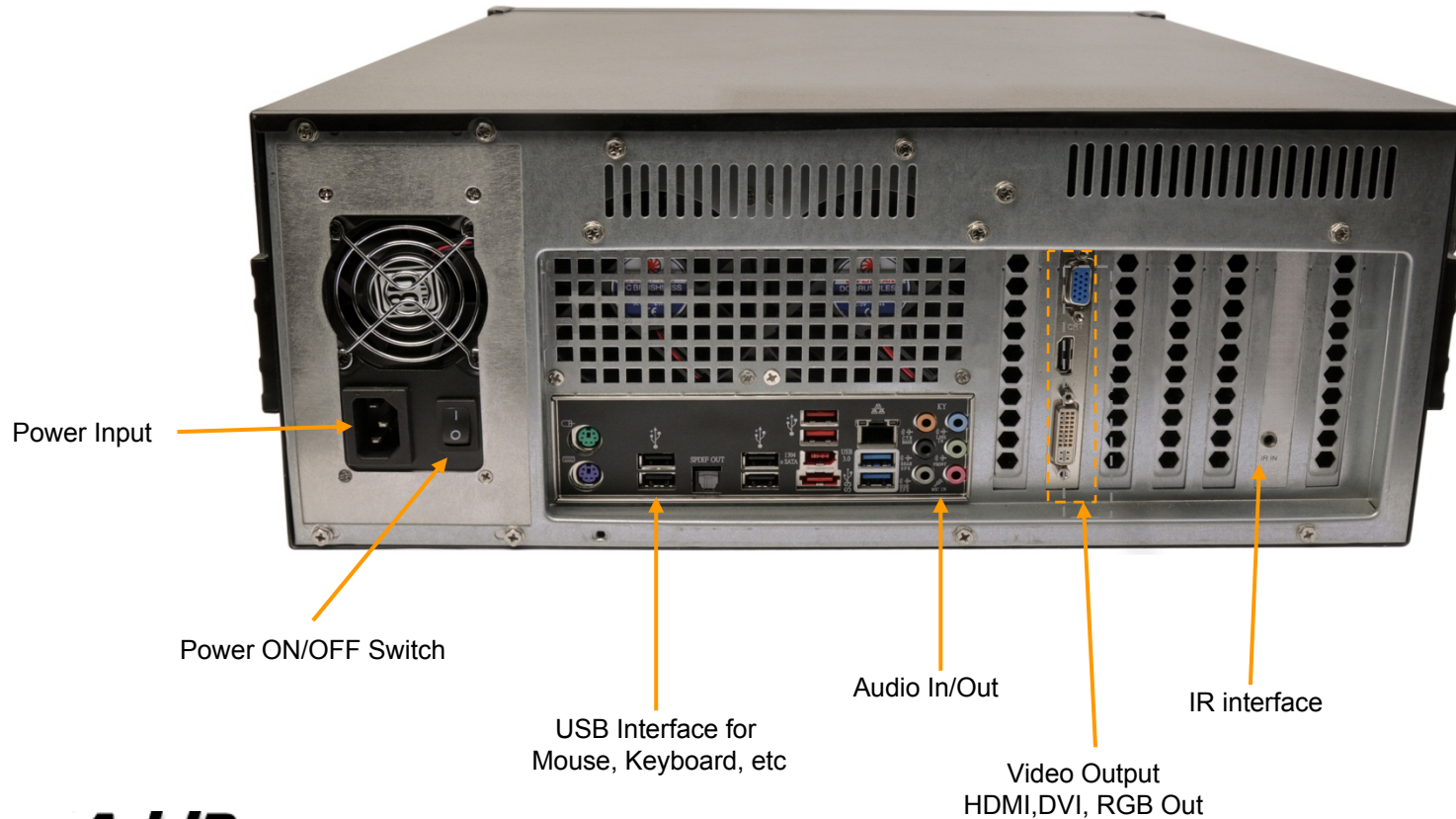


# Hardware Specification

AP-SDRS2000 HD NVR Storage Server

High End Processor

AP-SDRS2000 Front 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 displays the Smart DVR Manager web interface. The main window is titled "Smart DVR Manager" and includes a menu bar with "File", "Tool", "Configuration", and "Help". The interface 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 with 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". The status bar at the bottom indicates the date and time (2010-03-12 오후 3:42:59), the server address (172.16.14.113 : 8020), the version (Version 2.1.3723), the user (root), and the number of viewers and managers (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

Advanced Search

Record Time FROM 2010-03-12 오전 12:00:00 TO 2010-03-12 오후 11:59:59

Content Camera Name like 3 Time 2010-03-12 오전 12:00:00 ~ 2010-03-12 오후 11:59:59 Relation AND NONE

Advanced Searching Rules

Selected Searching Rule Clear

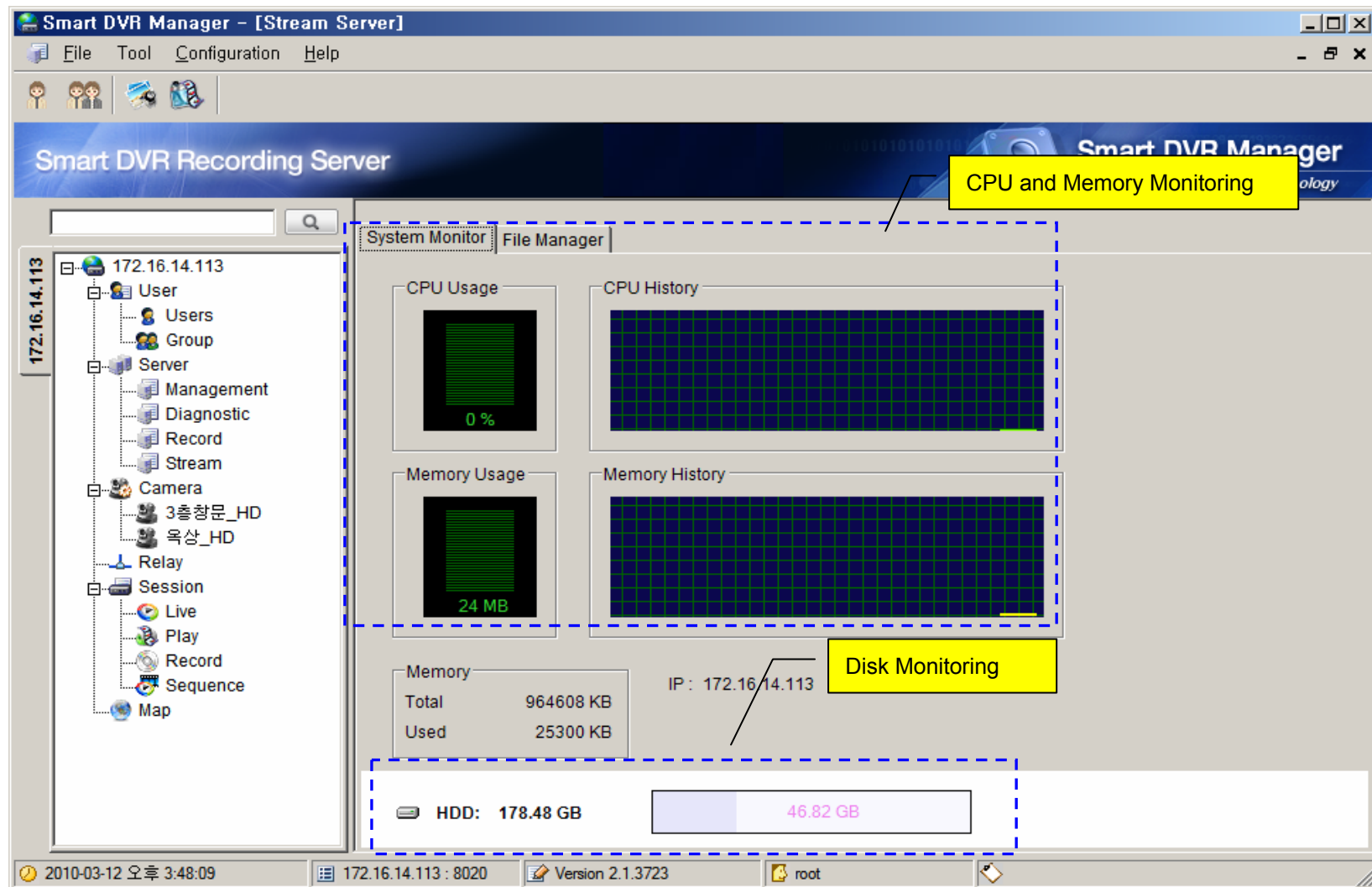
Searching Rule All Clear

Search Cancel

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

# 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:** A central area containing four charts: 'CPU Usage' (0%), 'CPU History' (line graph), 'Memory Usage' (24 MB), and 'Memory History' (line graph). A yellow callout box labeled 'CPU and Memory Monitoring' points to this section.
- File Manager:** A tab next to the System Monitor.
- Memory Summary:** A table showing system memory statistics:

Memory	Total	Used
	964608 KB	25300 KB

A yellow callout box labeled 'Disk Monitoring' points to the IP address '172.16.14.113' next to this table.
- HDD Monitoring:** A bar chart at the bottom showing 'HDD: 178.48 GB' total capacity and '46.82 GB' used space.
- Left Panel:** A tree view showing the server structure for IP '172.16.14.113', including folders for User, Server, Camera, and Session.
- Bottom Status Bar:** Displays the date and time '2010-03-12 오후 3:48:09', the IP and port '172.16.14.113 : 8020', the version 'Version 2.1.3723', and the user 'root'.

# Smart DVR Manager : Schedule

**User Defined Schedule Lists**

**Delete Schedule**

**Weekly and Daily Time Schedule**

**Add Schedule**

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**

Day: 2010-03-28

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

**User define Special Day**

**Set Special Day using calendar**

2010년 3월

일	월	화	수	목	금	토
28	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

오늘: 2010-03-12



# 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
--------	-------	----	----	-------	------	-------	-------

**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 table with columns for file name, total time, file size, recording time, and status. Below the table, there are progress bars for file transfer and conversion, along with checkboxes for options like 'file conversion' and 'delete files after download'.

**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 software interface. The main window shows a list of recorded files with columns for camera name, IP address, group, description, recording time, playback time, file name, and file size. 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. The VLC interface includes playback controls, a progress bar, and a volume slider. The status bar at the bottom of the VLC window shows the file path, playback speed (1.00x), and time (00:24/00:39).

**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	옥상_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 camera databases and a table of recorded files.

진행시간	파일 이름	파일 크기	
14:4...	00:00:39	2010031105433...	39,052 KB
14:2...	00:00:10	2010031105252...	10,298 KB
14:0...	00:00:00	2010031105015...	436 Byte

# 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 (172.16.14.113:8020)  
3층청문\_HD (5)  
육상\_HD (3)  
카메라 이미지  
육상\_HD  
육상\_HD  
육상\_HD  
Local Database  
3층청문\_HD (2)  
육상\_HD (3)  
Records  
카메라 이미지  
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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