

# HDMI based Video Conference Recording Solution

**HDMI based Video Conference Recording Solution**

- AP-HCC2000 HD Video Conference Codec
- AP-HDC300 HD Video Camera
- AP-NC2000 Full HD Video Codec
- AP-SDRS2000 HD Recording Server
- AP-MP100 Conference Microphone

[Learn More >](#)



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**AddPac Technology**

Sales and Marketing

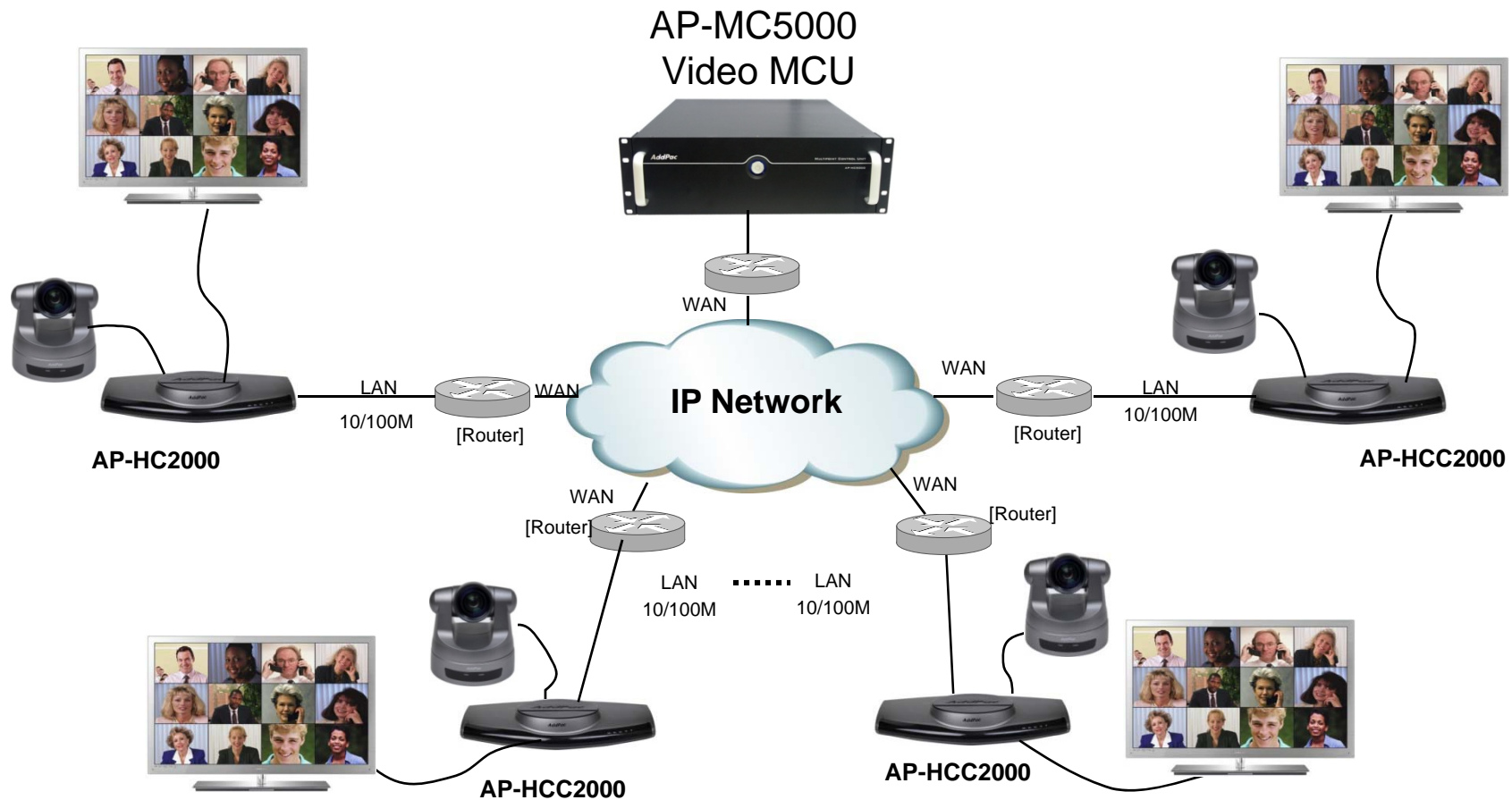
[www.addpac.com](http://www.addpac.com)

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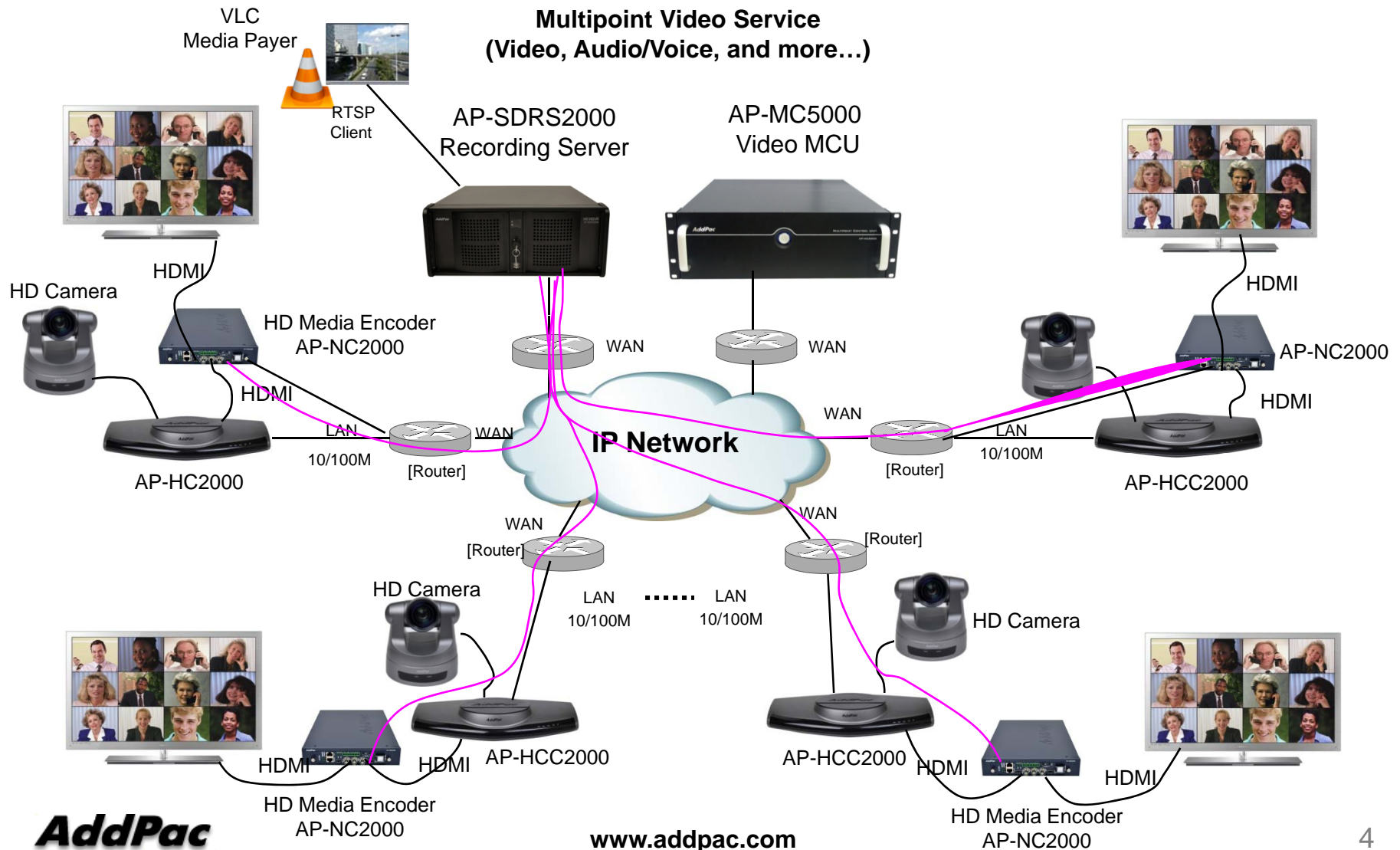
- Network Diagrams
- Product Specifications
  - HD IP Media Encoder  
: AP-NC2000 (AV6000N)
  - HD IP Recording/Streaming Server: AP-SDRS2000

# HDMI based Video Conference Recording Solution (Video Conference Only)

## Multipoint Video Service (Video, Audio/Voice, and more...)




# HDMI based Video Conference Recording Solution (Video Conference + Recording)





# HD IP Media Encoder Solution



# AP-NC2000

## One(1) Channel HD Video Encoder

# Main Features

## AP-NC2000 One(1) Channel HD Video Codec

- IP based Audio/Video Encoding/Decoding Solution
- Single Slot for HD Video Modules
- HD Video Encoder Module
- IP based Network Surveillance Solution
- High-performance Video, Audio, and Voice Service
- Firmware Upgradeable Architecture
- Video Solution with Outstanding Network Service Capability
- Internal Power Supply
- Audio/Video Privacy Protection

# Hardware Specification

## AP-NC2000 One(1) Channel HD Video Codec

High-end  
**DSP**

- High-end Programmable DSP Hardware Architecture
- One(1) Video Module Slots
- HD Video Encoder/Decode Module (Ex : AV3000)
  - Network Interface
    - One(1) 10/100/1000Mbps Gigabit Ethernet
    - One(1) Console Port
  - Powerful Video Input/output Interface
    - HD-SDI, HDMI, Analog
  - High quality Audio and Voice Interface
    - Stereo Audio Input/Output Connector
  - Camera Control Interface
    - One(1) RS-232C, RS422, RS485 Interface for Camera Control
  - I/O Interface
    - 2 Alarm Input, 1 Relay
- Internal Power Supply



# Hardware Specification

AP-NC2000 One(1) Channel HD Video Codec

High-end  
**DSP**

AP-NC2000 Front View



HD Video Encoder Module



# Hardware Specification

AP-NC2000D One(1) Channel HD Video Codec

High-end  
**DSP**

AP-NC2000D Front View



AV3000 HD Video Encoder/Decoder Module





# Video Modules

# Video Modules

High-end  
**DSP**

AV6000N Full HD Video Codec Module  
(H.264 1080i, 720P Dual Encoding)



HS3000 HD-SDI Subtitle Generator Module





# Error Robust Full HD Video Codec Module AV6000N

# Product Overview

## AV6000N Full HD Video Codec Module

- Full HD (1080i) Video Encoding/Decoding Service Features
- Video Codec : H.264 HP/MP/BP AVC Video Codec
- **Robust H.264 Temporal Domain SVC(Scalable Video Codec) Support**
- Video Input Interface : HDMI, HD-SDI, Analog (NTSC, PAL)
- Video Output Interface : HDMI, HD-SDI, Analog (NTSC, PAL)
- Dual Bit Streaming Support
- RTSP/RTP, TCP/UDP Protocol Support
- IP based Network Surveillance Solution
- High-performance Video, Audio, and Voice Service
- Firmware Upgradeable Architecture
- Video Solution with Outstanding Network Service Capability
- Web based Management Service
- AP-NC2000D, AP-NC2000, AP-NC3000, AP-NC5000 Platform Available

# Hardware Specification

## AV6000N Full HD Video Codec Module

RISC  
CPU

High-End  
VP

- **RISC + Video Processor Computing Power**
- **AV6000N Video Module**
  - **Network Interface**
    - One(1) 10/100/1000Mbps Gigabit Ethernet
  - **Video Interface**
    - One(1) Channel HD-SDI Input
    - One(1) Channel HDMI Input
    - One(1) Channel CVBS Input or Output (selected by DIP Switch)
    - One(1) Channel HD-SDI Output
    - One(1) Channel HDMI Output
  - **One(1) RS-232 Console Interface (RJ45)**
  - **Camera Control Interface**
    - One(1) RS-232C, RS422, RS485 Interface for External Camera Control
  - **I/O Interface**
    - Two(2) Alarm Input /One(1) Relay Out

# Hardware Specification

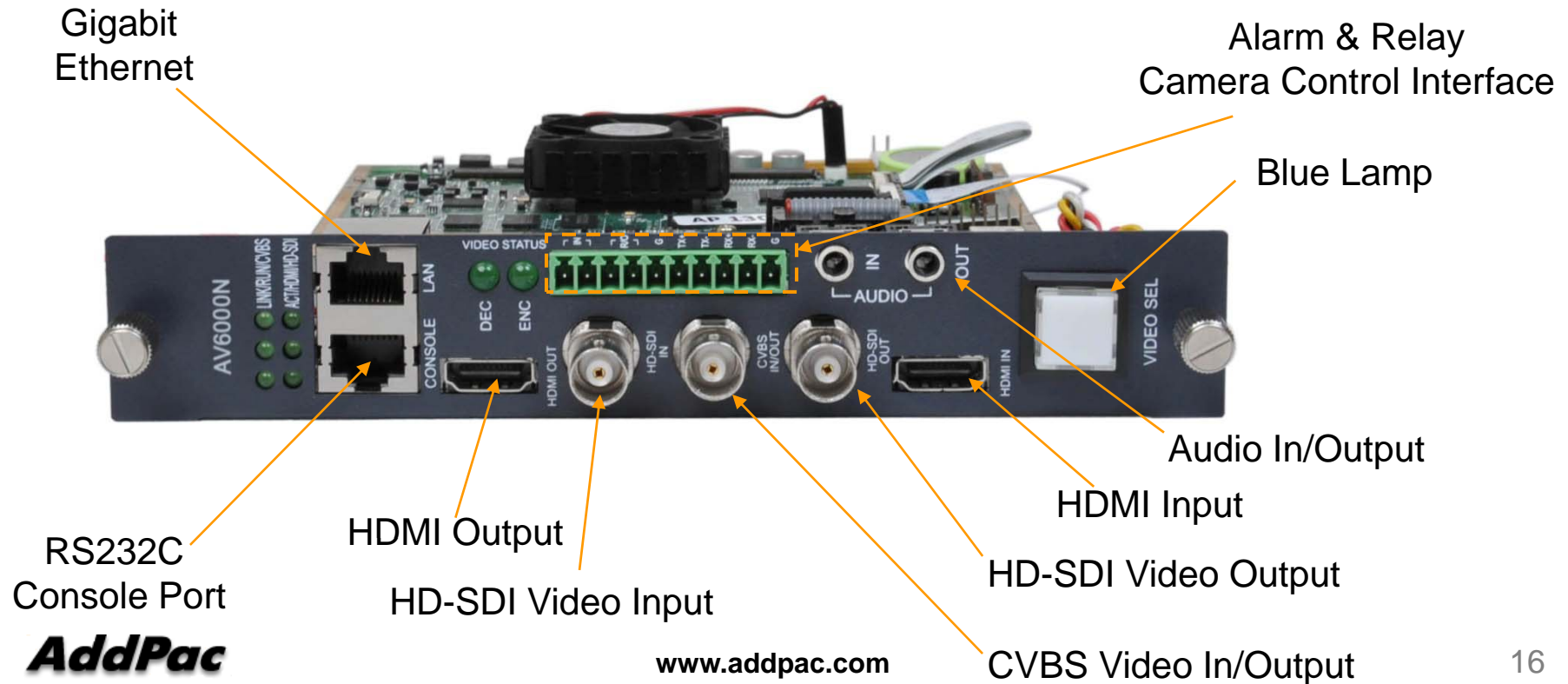
AV6000N Full HD Video Codec Module

RISC  
CPU

High-End  
VP

## Hardware Module Specification

AV6000N HD Video Encoder/Decoder Module(H.264)





# Hardware Specification

## AV6000N Full HD Video Codec Module

### Hardware Specification

AP-NC2000D Front View



AV6000N HD Video Module



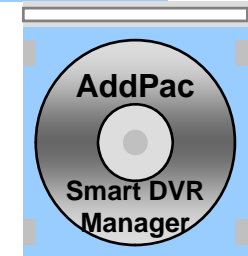
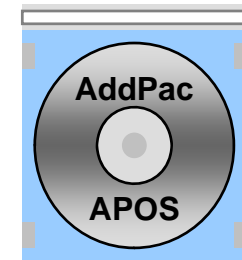
Power On/Off Switch  
[www.addpac.com](http://www.addpac.com)

DC Power Supply

# Software Service

## AV6000N Full HD Video Codec Module

- Built-in AddPac APOS Internetworking Software
  - Scalability, Functionality, and Stability Features
  - Full HD Video Encoding/Decoding Service Features
  - Video Upscale and Downscaling Service
- Firmware Upgradeable Architecture
- Industry Standard Network Protocol Features
- Highly User Friendly Management Features
  - Smart DVR Manager
  - Telnet or RS-232C based Command Line Interface



# Concurrent Triple Bit Stream Matrix

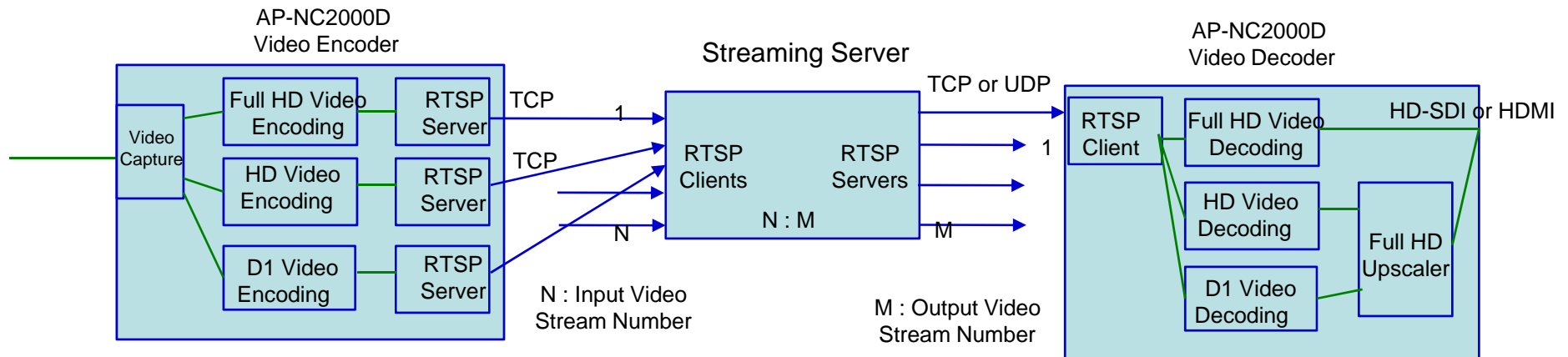
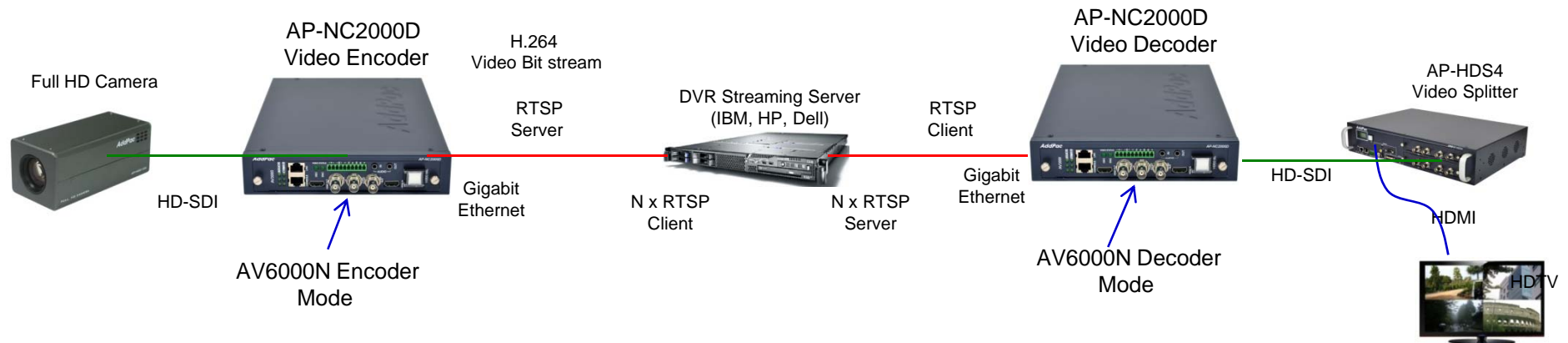
AV6000N Full HD Video Codec Module

## Triple Video Encoding Bit Stream Matrix

Video Input	Concurrent Video Encoding Bit Stream			
	CIF	D1	HD(720P)	FULL HD (1080i)
Analog Video Input (NSTC/PAL)	Available	Available	N/A	N/A
HD-SDI Video Input (720P)	Option	Available	Available	N/A
HD-SDI Video Input (1080i)	Option	Available	Available	Available

# RTSP Service Network Diagram

## AV6000N Full HD Video Codec Module



Example (N : M = 64 : 128)

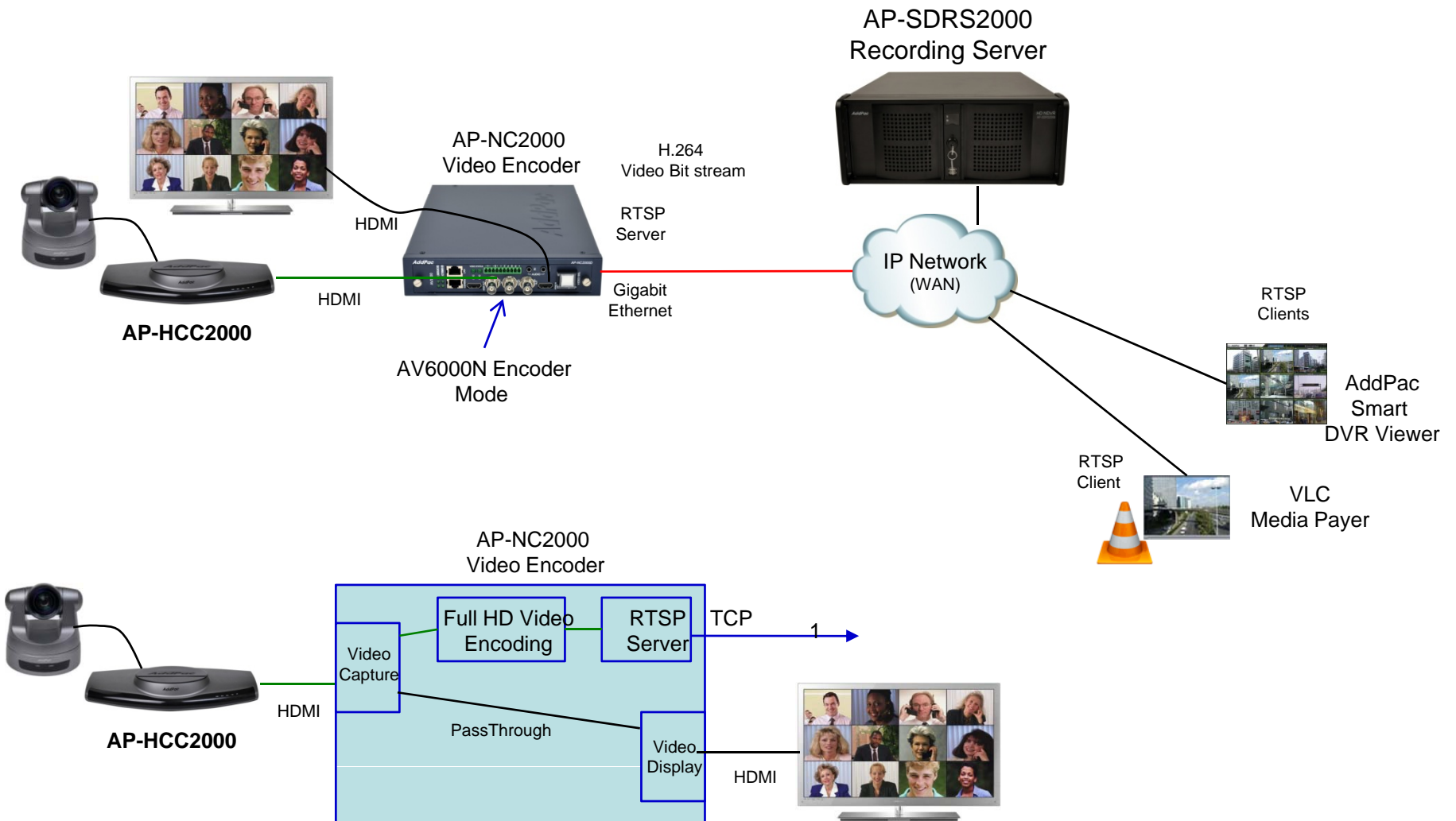
# RTSP Service Features

## AV6000N Full HD Video Codec Module

- AV6000N Video Encoder Mode
  - RTSP Server Mode
  - Multi-Channel RTSP Server Mode  
(Full HD, HD, D1 Triple Encoding Mode or Dual Full HD, HD, etc)
  - RTSP, TCP Protocol Support for Error Robust Service
- AV6000N Video Decoder Mode
  - RTSP Client Mode
  - RTSP/TCP or RTSP/UDP Mode Support

# Video Conference Recording Network Diagram

## AV6000N Full HD Video Codec Module





# 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

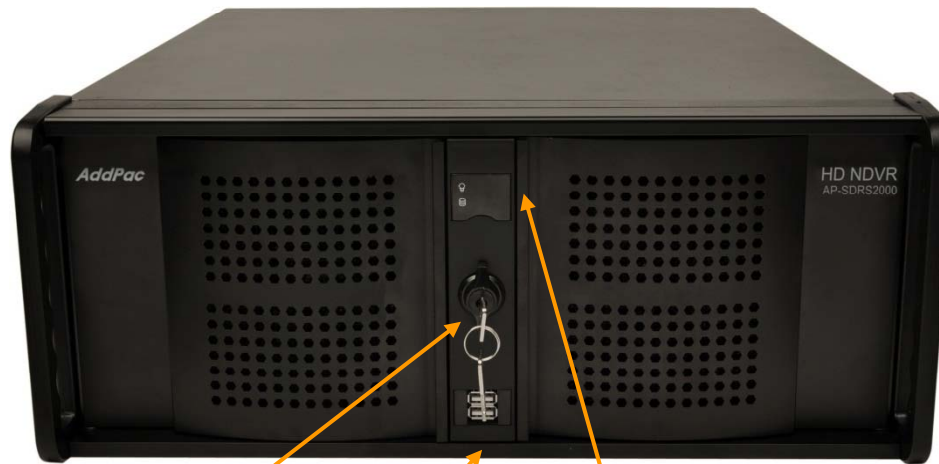
- High Performance Computing Power
- Main Chassis
  - Network Interface
    - One(1) 10/100/1000Mbps Fast Ethernet
  - Video Output Interface
    - HDMI, DVI, RGB Video Output
  - USB 2.0 Interfaces for Mouse, Keyboard, etc
  - One(1) DVD Writer for Video File Backup
  - Up to Four(4) Hard Disk

# Hardware Specification

AP-SDRS2000 HD NVR Storage Server

High End  
Processor

AP-SDRS2000 Front Side



Cabinet Open Key

USB Interface

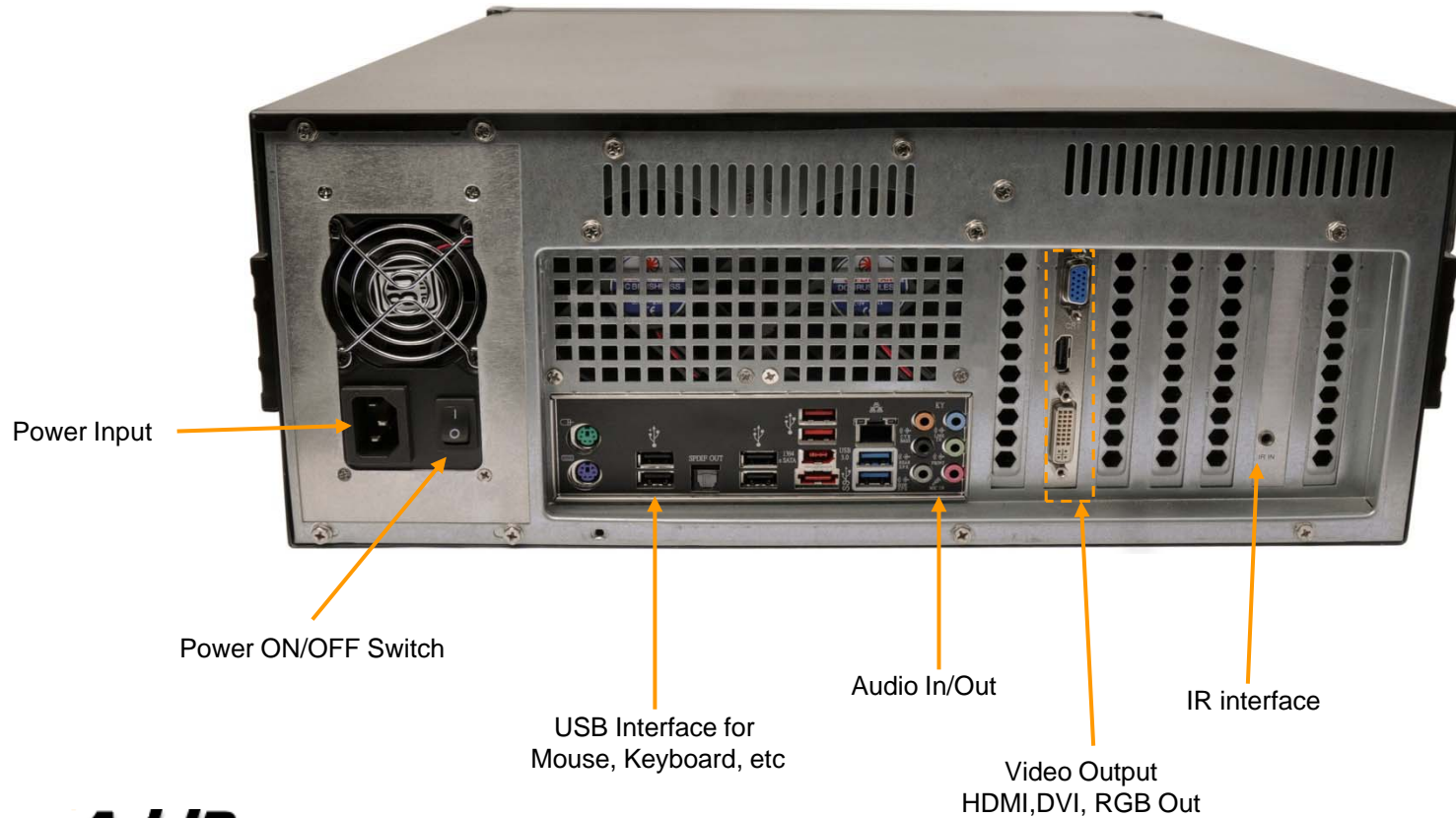
Power & HDD Access Indication LAMP

# Hardware Specification

AP-SDRS2000 HD NVR Storage Server

High End  
Processor

AP-SDRS2000 Back Side





# 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 interface. The left sidebar shows a tree view of the system structure for IP 172.16.14.113, including sections for User, Server, Management, Diagnostic, Record, Stream, Camera (with sub-items 3층창문\_HD and 옥상\_HD), Relay, and Session (with sub-items Live, Play, Record, Sequence, and Map). The main area features tabs for General, Configuration, Schedule, and Holiday. The General tab is active, showing 'System User configuration' with a 'Server Port' of 8020. Below this are two tables: 'Viewer List' (10 User Licensed) and 'Manager List' (5 User Licensed). The Manager List table is highlighted with a callout for 'Login User Monitoring' and contains the following data:

User	IP
root	172.16.1.14
root	172.16.1.14
root	172.16.34.2

The status bar at the bottom shows the date and time (2010-03-12 오후 3:42:59), the server IP and port (172.16.14.113 : 8020), the version (Version 2.1.3723), the current 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 three entries. A yellow box labeled 'Recording Media Searching Result' points to the table. Above the table, a yellow box labeled 'Recording File Download' points to a download icon, and another yellow box labeled 'Excel Exporting' points to an Excel icon. A yellow box labeled 'Recording Media Management' points to the 'Record' menu item in the navigation tree. The status bar at the bottom shows 'Total 3 results found.' and system information.

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

# 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 Relation

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

Advanced Searching Rules

Selected Searching Rule Clear

Searching Rule All Clear

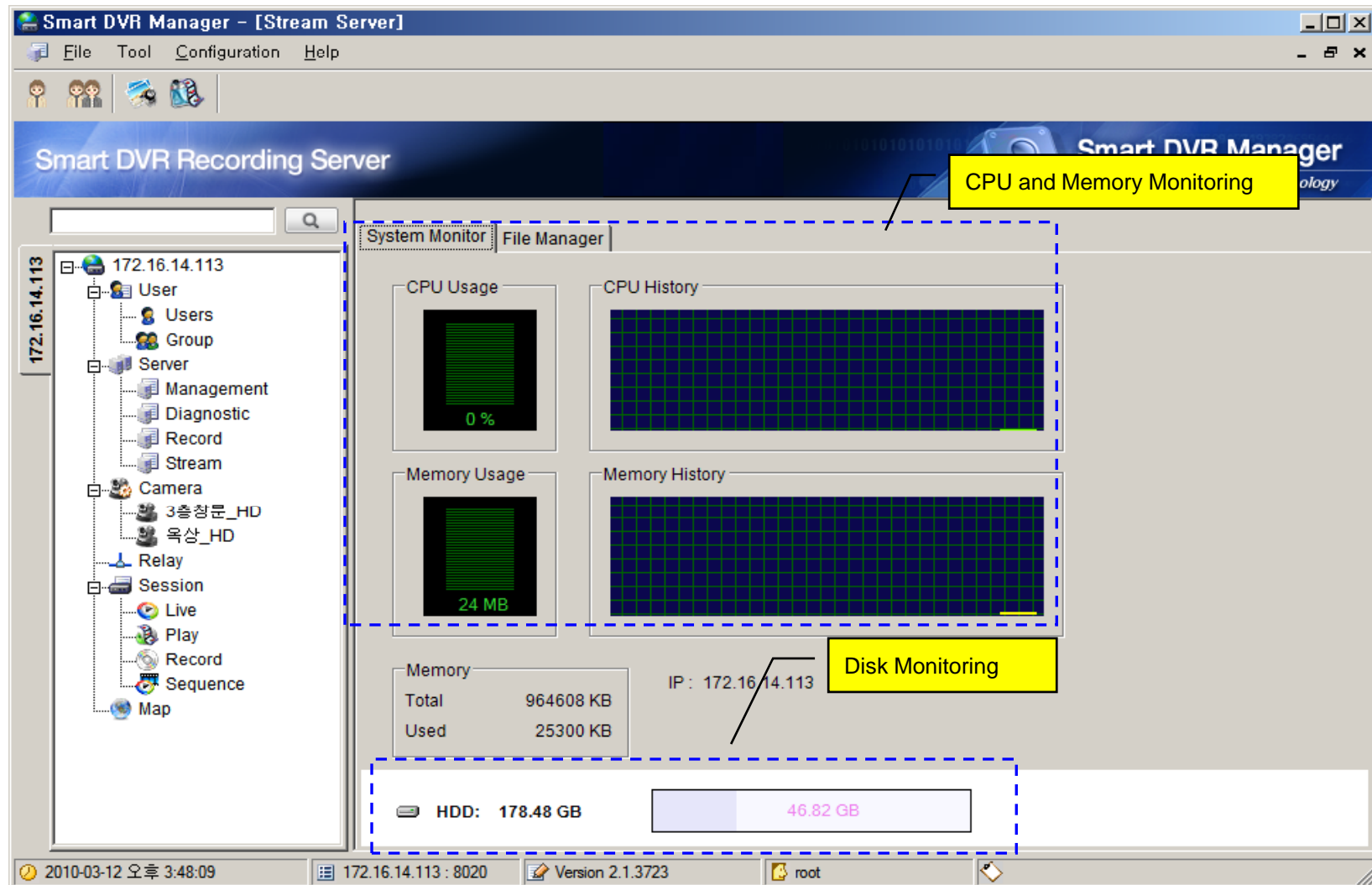
Search Cancel

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:** This section is highlighted with a blue dashed box and contains four monitoring graphs:
  - 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:** This section is highlighted with a yellow box and shows a table of memory statistics:

Memory	Value
Total	964608 KB
Used	25300 KB
- HDD Monitoring:** This section is highlighted with a blue dashed box and shows a progress bar for the hard drive:

HDD: 178.48 GB (Total) / 46.82 GB (Used)

The interface also includes a left-hand navigation tree for the server 172.16.14.113, a top menu bar (File, Tool, Configuration, Help), and a status bar at the bottom showing the date (2010-03-12), time (오후 3:48:09), IP address (172.16.14.113), port (8020), version (2.1.3723), and 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																								

**User define Special Day**

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

**Set Special Day using calendar**

2010-03-12 오후 3:54:03 | 172.16.14.113 : 8020 | Version 2.1.3723 | root | Viewer : 0 Manager : 3



# 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**

**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' interface with a 'Download' dialog box open. The dialog box contains a table of files to be downloaded and two progress bars for file transfer and conversion.

**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**

Additional interface details include a sidebar with 'Remote Database (172.16.14.113)' and 'Local Database', and a status bar at the bottom showing 'version 1.0.3723' and 'Scheduler waiting'.

# 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 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 databases (Remote and Local) and a table of recorded files with columns for '진행시간' (Progress Time), '파일 이름' (File Name), and '파일 크기' (File Size).



# 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



# Thank you!

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