

# Video Surveillance SIP Video Door Phone Solution

**Video Surveillance SIP Video Door Phone Solution**

AP-VAC60 Video Surveillance SIP Video Door Phone  
AP-HNR1004 HD Standalone DVR  
AP-ACS1000 Door Access Control Server  
AP-VP280 IP Video Phone

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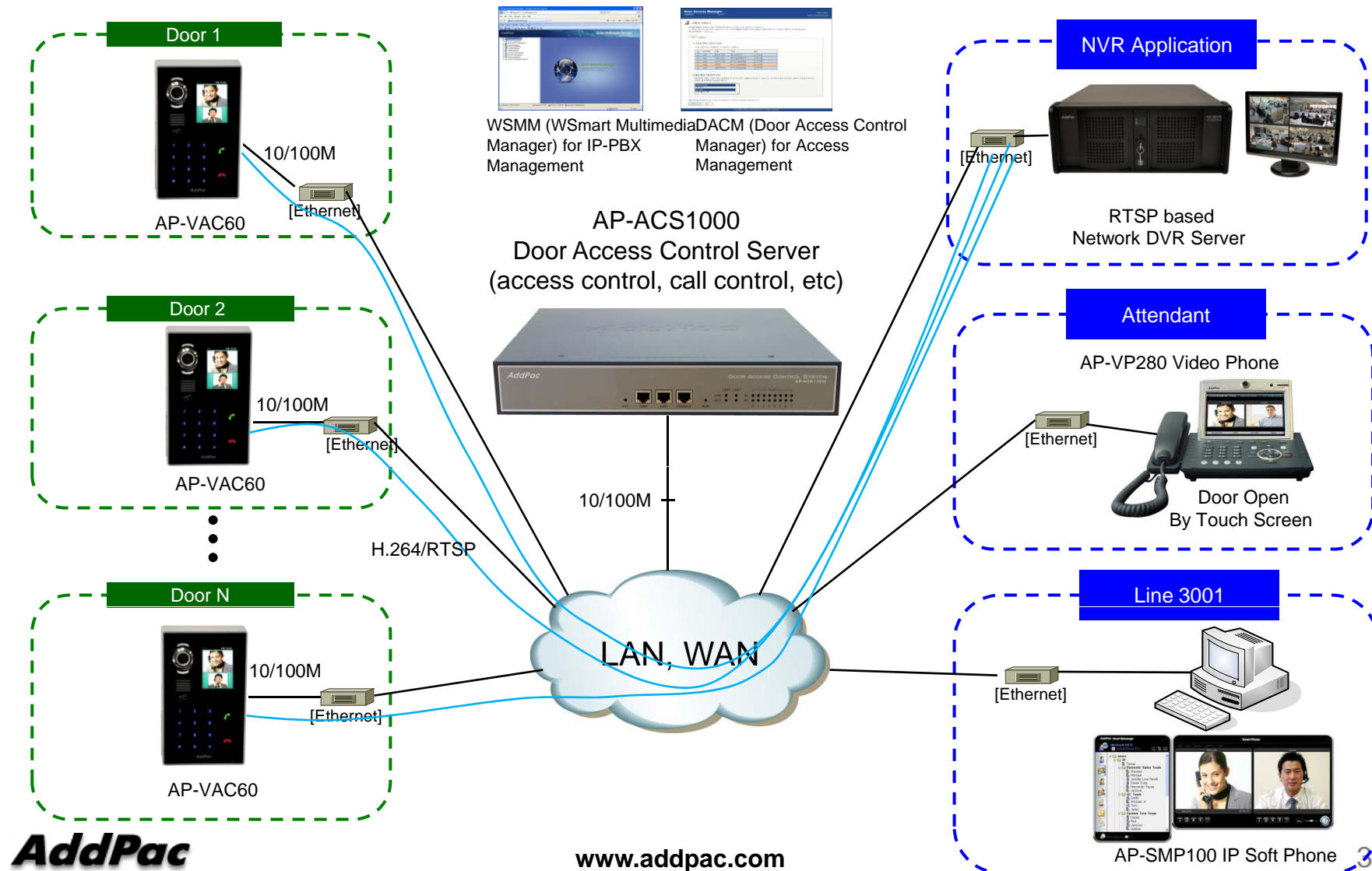
Sales and Marketing

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  - AP-ACS1000 Door Access Control System
  - AP-VP280, AP-VP120 IP Video Phone
  - AP-VIC100 IP Video Intercom
  - AP-SMP100 IP Soft Video Phone

# Video Surveillance + IP door phone service diagram



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# Video Surveillance Protocol Diagram

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

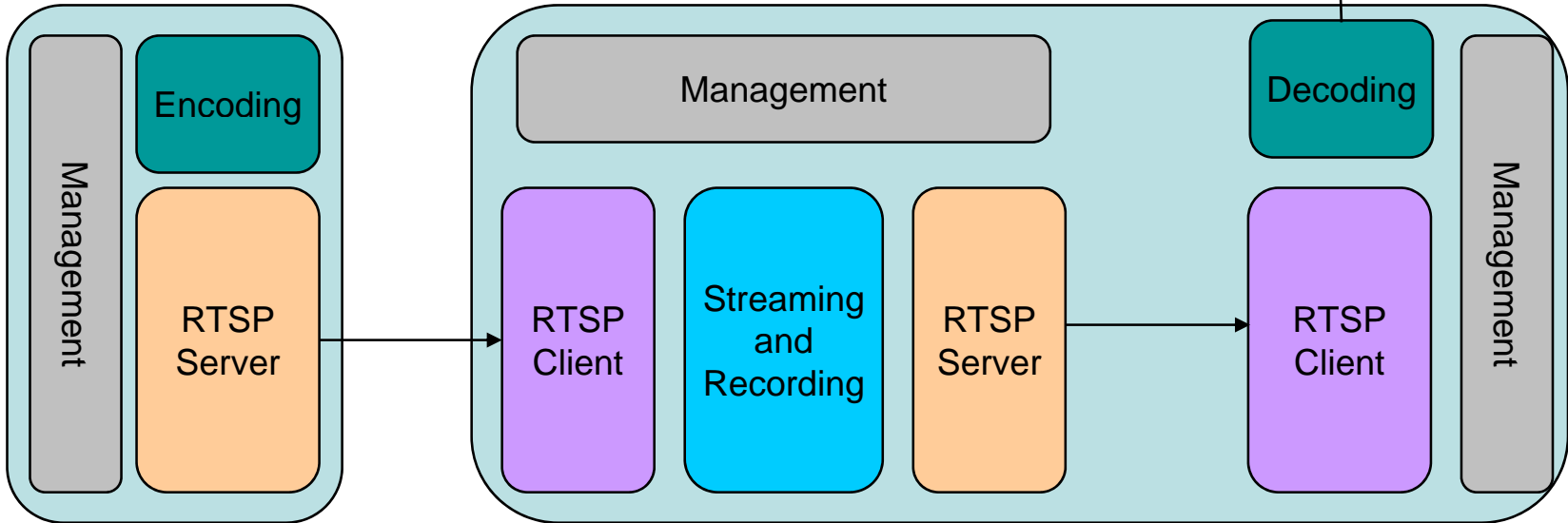
AP-VAC60 IP Camera Service



AP-HNR104 Network DVR Storage Server

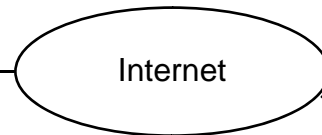


HDMI Video Output



# Dual Video Encoding Scheme

AddPac IP Video Door Phone

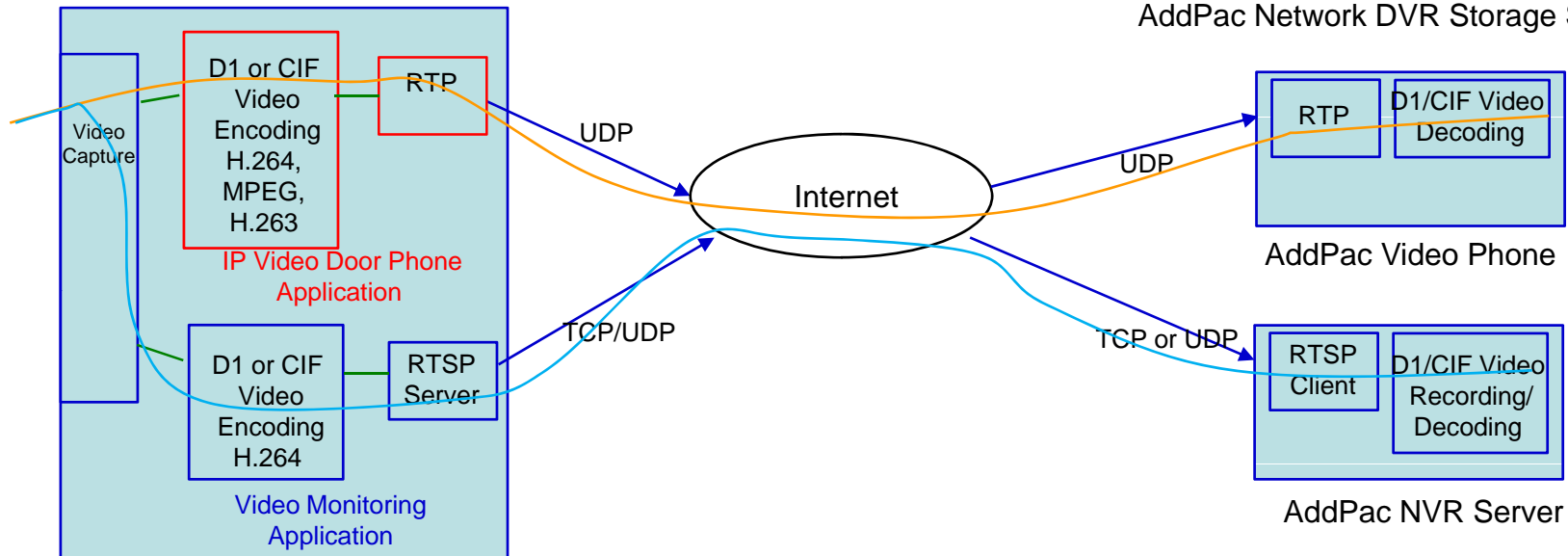


AddPac Video Phone



AddPac Network DVR Storage Server


AP-VAC60 IP Video Door Phone  
(Concurrent Dual Video Encoding)





# Video Surveillance SIP Video Door Phone (AP-VAC60)

# Video Surveillance SIP Door Phone

Model	AP-VAC60	
Service Features		
Dual Video Encoding for Video Surveillance		Support
SIP Door Phone		SIP <b>Video</b> Door Phone
Duplex (Voice)		Full Duplex
Key Pad		3 x 4 Key, etc
LCD		3.5 inch LCD
RF Card		Support
Camera Sensor		SD(VGA)
Video Codec		SD, H.264/MPEG4
Voice Codec		G.711,G722(option)
Signaling		SIP
Protocol for Video Surveillance		RTSP
MIC & Speaker Phone		Support
LAN Port		1
PoE(Optional)		Support

# Product Overview

## AP-VAC60 Video Surveillance SIP Video Door Phone

- High Performance SIP Video Door Phone Solution
- Concurrent Video Monitoring Service (Additional IP Camera Service)
- Dual Video Encoding Service Features
  - First One : IP Video Door Phone, Second One : IP Camera Codec
- Video Camera, 3x4 Key, TFT Color LCD, Internal MIC & Speaker
- High Quality 2.4 Inch LCD, 320 x 240 Video Resolution
- SIP VoIP Signaling Stack Embedded
- High-performance Video/Voice Codec Support
  - H.264/MPEG4, G.711, etc
- One(1) 10/100Mbps Fast Ethernet
- PoE(Power over Ethernet) Support
- High Quality Speaker Phone Features
- Powerful Acoustic Echo Canceller Chip Embedded
- Powerful Network Protocols (PPPoE, DHCP, Static Routing, etc)
- Firmware Upgradeable Architecture
- Optional Die-Casting Frame Chassis (STILL CASE)
- Advanced Voice QoS Mechanism



# Hardware Specification

AP-VAC60 Video Surveillance SIP Video Door Phone

RISC  
CPU

High-end  
DSP

- RISC+DSP Microprocessor Computing Power
- Audio and Voice Interface
  - Internal MIC
  - Internal Speaker
  - 3 x 4 key PAD
- Video Camera Interface
- TFT Color LCD Interface
  - 2.4 Inch LCD, 320 x 240 Video Resolution
- Network Interface
  - One(1) 10/100Mbps Fast Ethernet
- RF Card Interface
- Alarm & Relay Out Interface (door open, etc)
- RS232/RS485 Interface
- External RCA Audio Line Out and MIC In (back side)
- Power Supply
  - Power over Ethernet (Option)
  - External Power Supply



# Hardware Specification

AP-VAC60 Video Surveillance SIP Video Door Phone

RISC  
CPU

High-end  
DSP

- **Acoustic Echo Canceller**
  - Full-duplex operation during double-talk situations
  - One channel AEC, one channel LEC up to 256ms shared
  - Cancels echoes with up to 10dB echo return
  - Advanced noise reduction(up to 20dB)
- **Speaker**
  - Impedance : 8 +-15%ohm at 1kHz, 1.0 Vrms
  - Sound Pressure : 90 +- 3dB at 0.1W/10 CM  
at 800Hz, 1.0kHz, 1.2kHz, 1.5kHz
  - Resonance Level : 550Hz +- 20%Hz at Fo Hz, 1.0Vrms
  - Frequency Range : Fo Hz ~20kHz
  - Input Power : Normal : 1.0 W, Max : 2.0W
- **Audio Amplifier**
  - 1-W BTL Output(5V, 0.11 % THD+N)
  - Uncompensated Gains of 2 to 20 (BTL Mode)
  - Thermal and Shot-circuit Protection
  - High Supply Ripple Rejection Ratio
- **PoE(Power over Ethernet)**
  - IEEE802.3af compliant
  - Input voltage range 36V to 57V
  - Short-circuit Protection



# Hardware Specification

AP-VAC60 Video Surveillance SIP Video Door Phone

RISC  
CPU

High-end  
DSP

- **LCD Controller**
  - One-Chip Solution for amorphous TFT-LCD
  - Support resolution up to 240xRGBx320
  - Built-in 172800 bytes internal RAM
  - 6,8,16, and 18-bit RGB Interface
  - Resize Function ( x ½, x ¼)
  - On-Chip Power Management System
- **Camera**
  - High Sensitivity for low-light operation
  - Output support for Raw RGB, RGB, and YCrCb format
  - Image Size : VGA, QVGA, and any size scaling down from CIF to 40x30
  - Support AEC, AGC,AWB, ABF, ABLC
  - Saturation Level, Edge Enhancement Level, De-noise level Auto adjust

# Hardware Specification

AP-VAC60 Video Surveillance SIP Video Door Phone

RISC  
CPU

High-end  
DSP

- RF Card Sensor
  - Protocol Supported
    - ISO14443A/B all bit rates
      - > 106,212,424 and 848 kbps
    - Compatible to MiFare Classic
    - ISO15693 all modes
      - > 1.65/6.6 & 26.5 kbps
      - > Uplink 1 & 2 sub-carrier
  - Receiver
    - Rx Sensitivity down to 1mVrms
    - Rx Automatic Gain Control
    - Accept external baseband signal from external circuitry for frame level processing
    - Integrated signal strength indicator (SSI)
    - On-Chip Framing handler for supported standard
  - Transmitter
    - Typical proximity operating distance up to 100mm.
    - Software configurable modulation index
    - Maximum driving current up to 200 mA/PIN @ 5V
    - Accept external baseband signal for RF modulation
    - Wide Transmitter driver supply range from 2.7~7.0V



RF Card Sensor

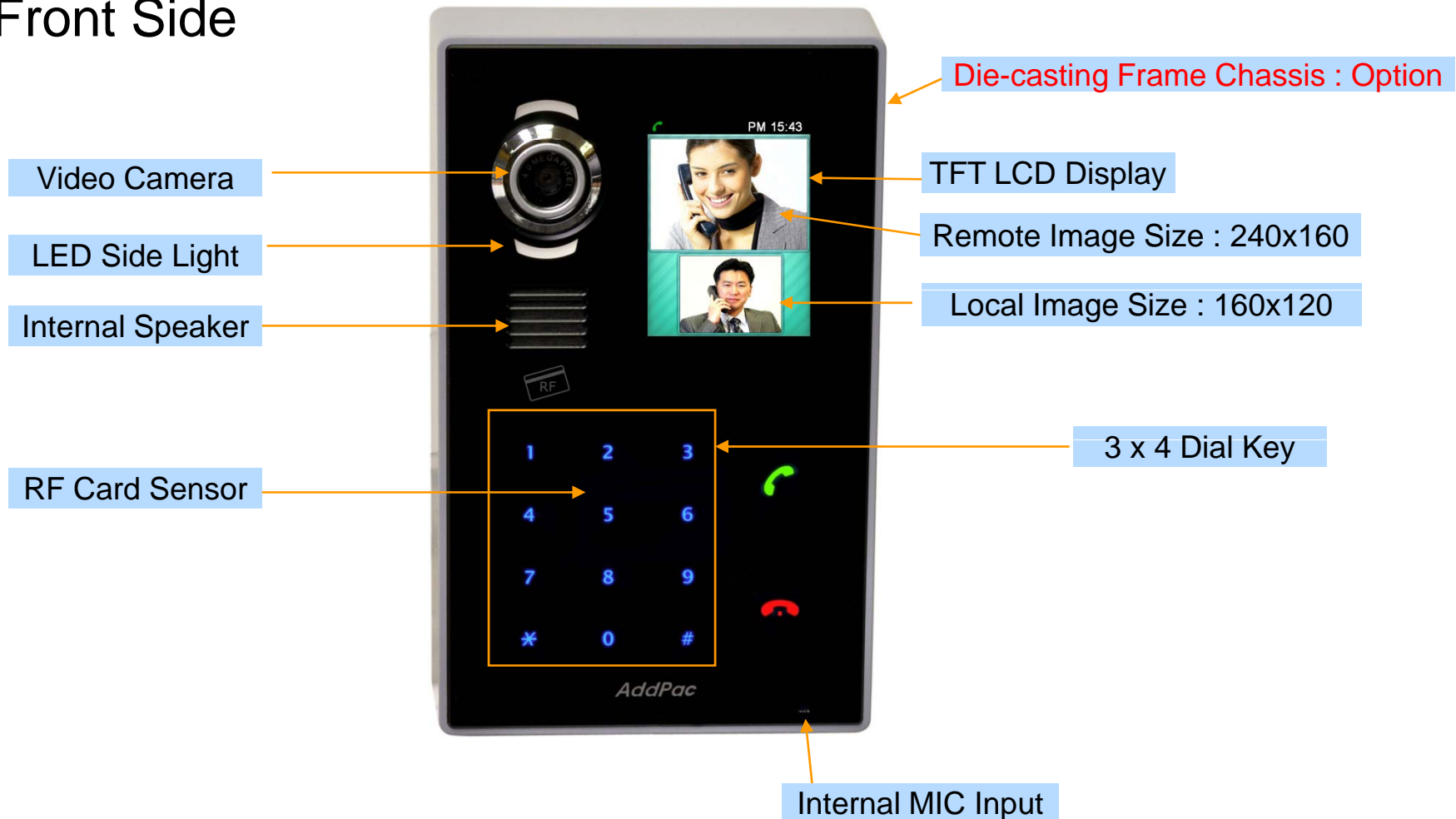
# Hardware Specification

AP-VAC60 Video Surveillance SIP Video Door Phone

RISC  
CPU

High-end  
DSP

## Front Side



# Hardware Specification

AP-VAC60 Video Surveillance SIP Video Door Phone

High-end  
**DSP**

Front Side



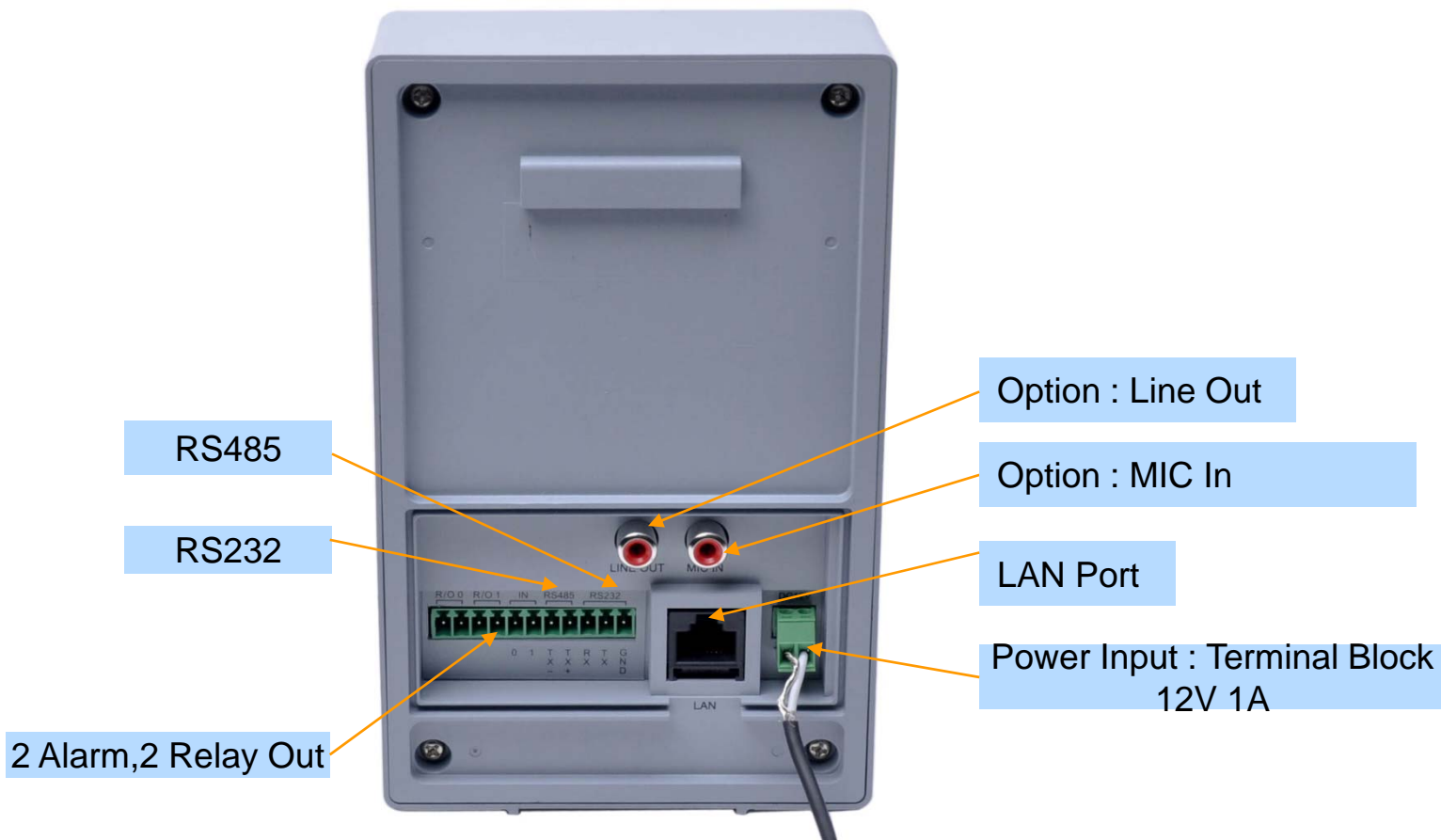
# Hardware Specification

AP-VAC60 Video Surveillance SIP Video Door Phone

RISC  
CPU

High-end  
DSP

## Back Side



# Hardware Specification

AP-VAC60 Video Surveillance SIP Video Door Phone

RISC  
CPU

High-end  
DSP

Back Side



Wall Mount Bracket

Rubber Cover for light waterproof



# Hardware Specification

AP-VAC60 Video Surveillance SIP Video Door Phone

RISC  
CPU

High-end  
DSP

## Power Supply

Terminal Block



12V 1A Power Adaptor

Example





# NVR Storage Solution Component Features



# AP-HNR1004

## Standalone Network DVR

# Hardware Specification

AP-HNR1004 Standalone Network DVR

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
  - IR Input port for Remote Control
  - Up to Four(4) Hard Disk

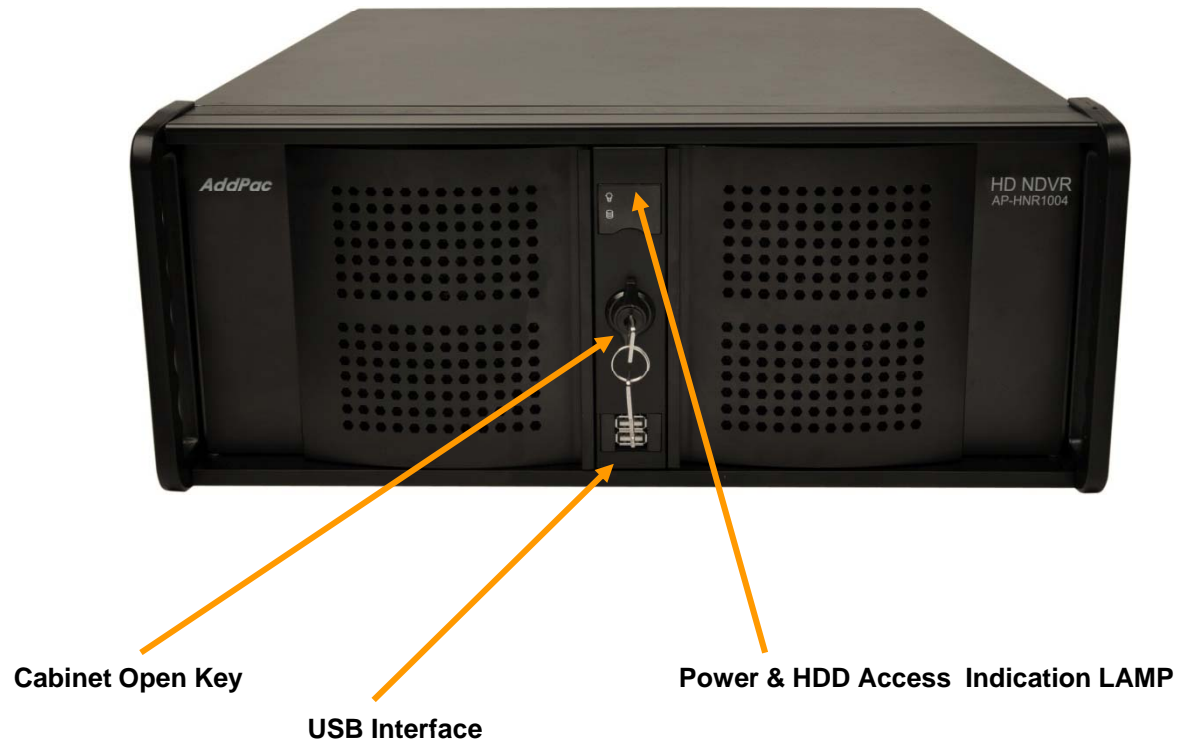


# Hardware Specification

AP-HNR1004 Standalone Network DVR

High End  
Processor

AP-HNR1004 Front Side

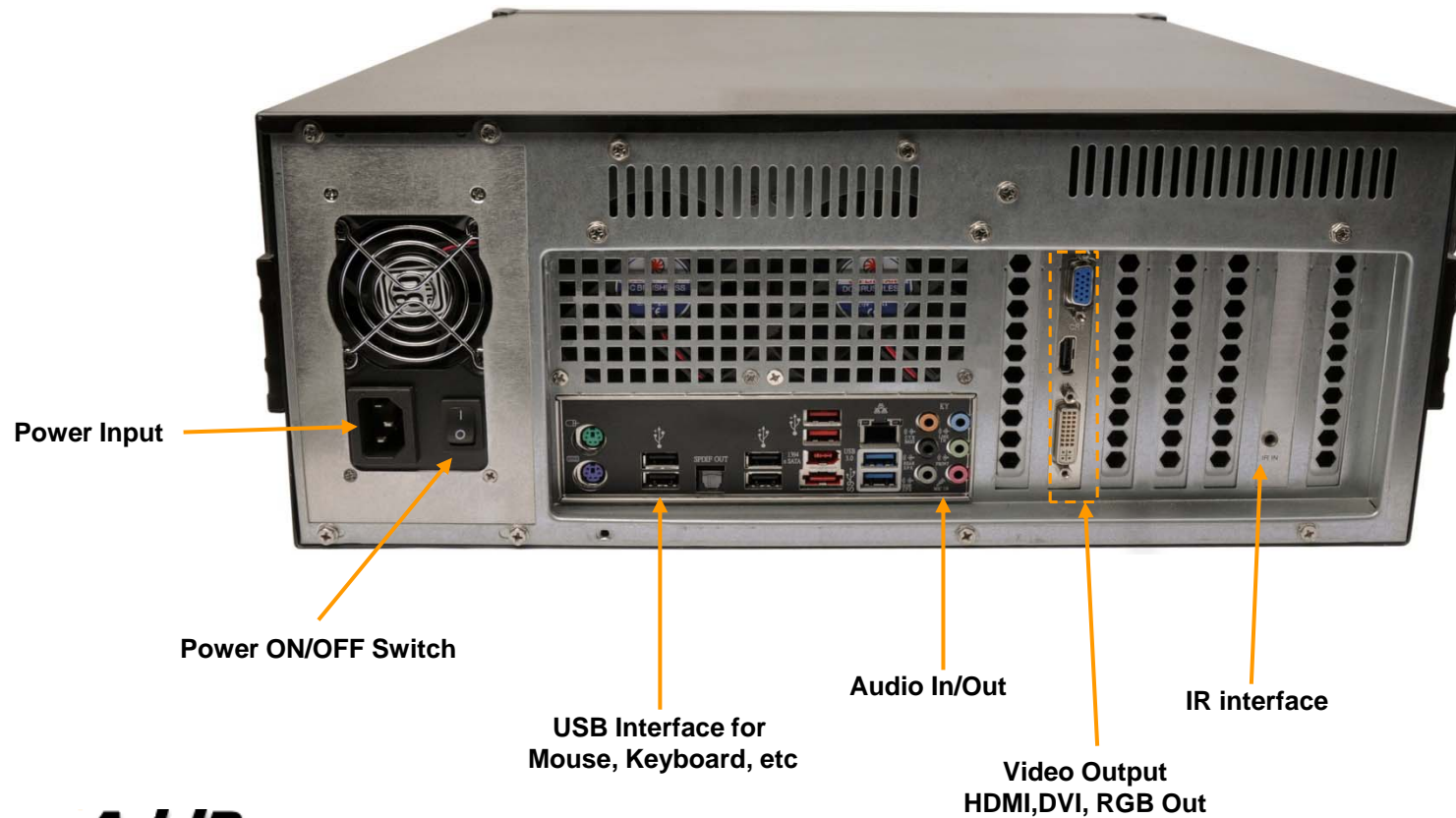


# Hardware Specification

AP-HNR1004 Standalone Network DVR

High End  
Processor

AP-HNR1004 Back Side





# AP-SDRS2000 HD NVR Storage Server

# Product Overview

## AP-SDRS2000 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 NVR Storage Server

High End  
Processor

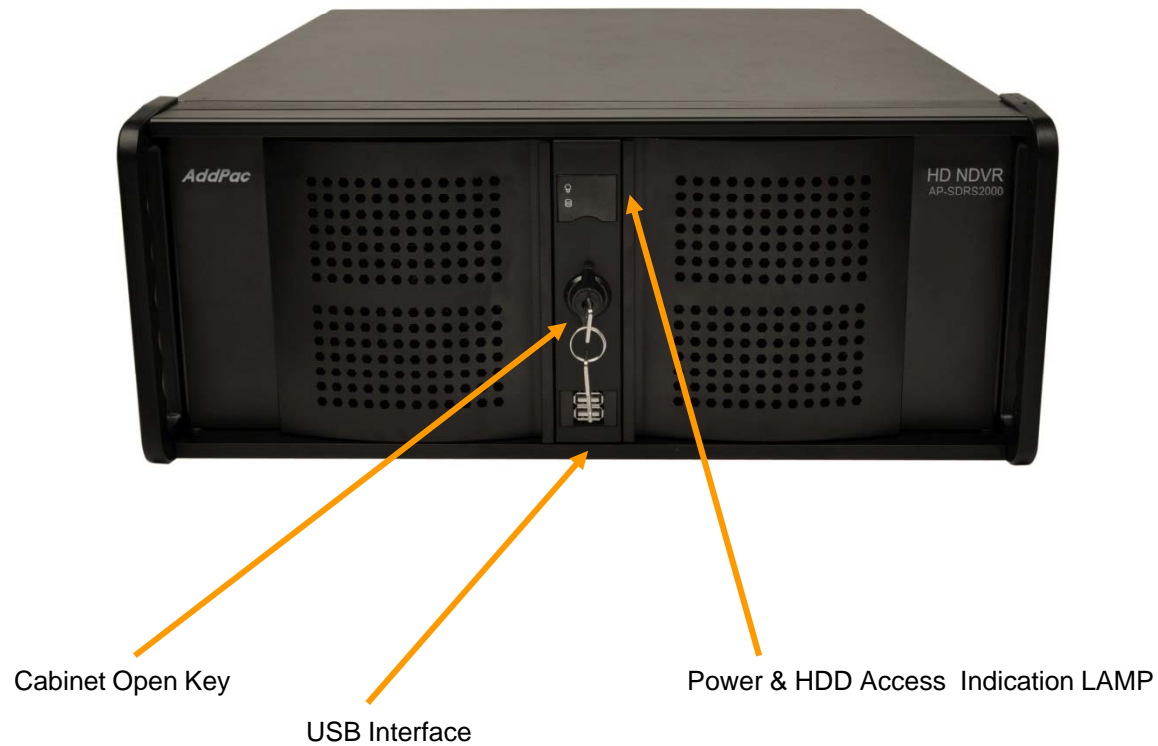
- High Performance Computing Power
- Main Chassis
  - Network Interface
    - One(1) 10/100/1000Mbps Fast Ethernet
  - Video Output Interface
    - HDMI, DVI,RGB Video Output
  - USB 2.0 Interfaces for Mouse, Keyboard, etc
  - One(1) DVD Writer for Video File Backup
  - Up to Four(4) Hard Disk

# Hardware Specification

AP-SDRS2000 NVR Storage Server

High End  
Processor

AP-SDRS2000 Front Side

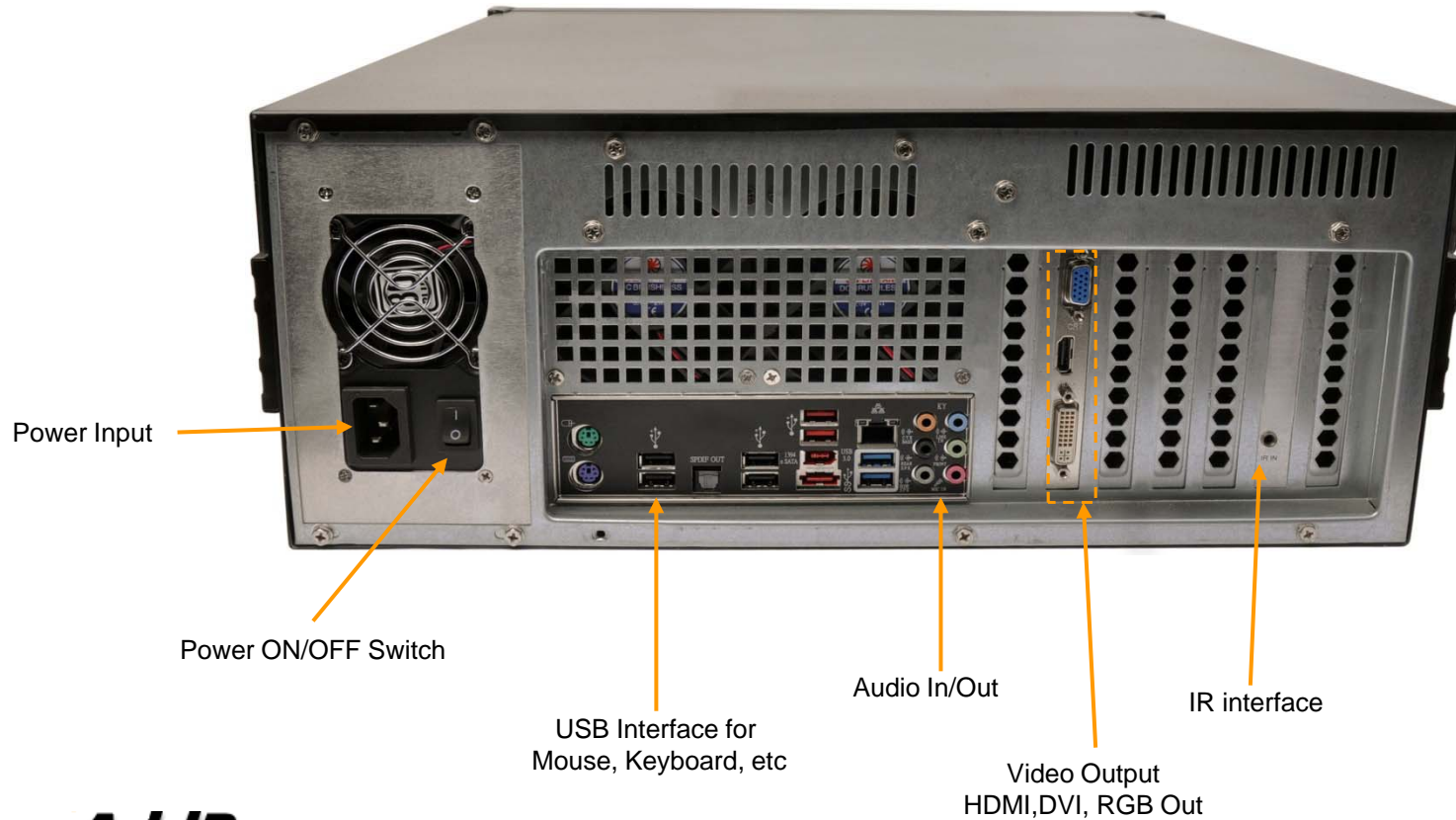


# Hardware Specification

AP-SDRS2000 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 interface. The left sidebar contains a tree view of the system structure. The main area is divided into several sections:

- Camera Searching:** A search bar at the top of the sidebar.
- System User configuration:** A section with tabs for General, Configuration, Schedule, and Holiday. It includes a 'Server Port' field set to 8020.
- 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.
- Login User Monitoring:** A table showing active users and managers.

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 three entries. A yellow box labeled 'Recording File Download' points to a download icon in the table's toolbar. Another yellow box labeled 'Excel Exporting' points to an Excel icon. A third yellow box labeled 'Recording Media Searching Result' points to the table itself. A fourth yellow box labeled 'Recording Media Management' points to the 'Record' menu item in the navigation tree. The table contains the following data:

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

At the bottom of the interface, it shows 'Total 3 results found.' and system information including the date '2010-03-12 오후 3:44:48', IP '172.16.14.113 : 8020', version 'Version 2.1.3723', and user 'root'.



# 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

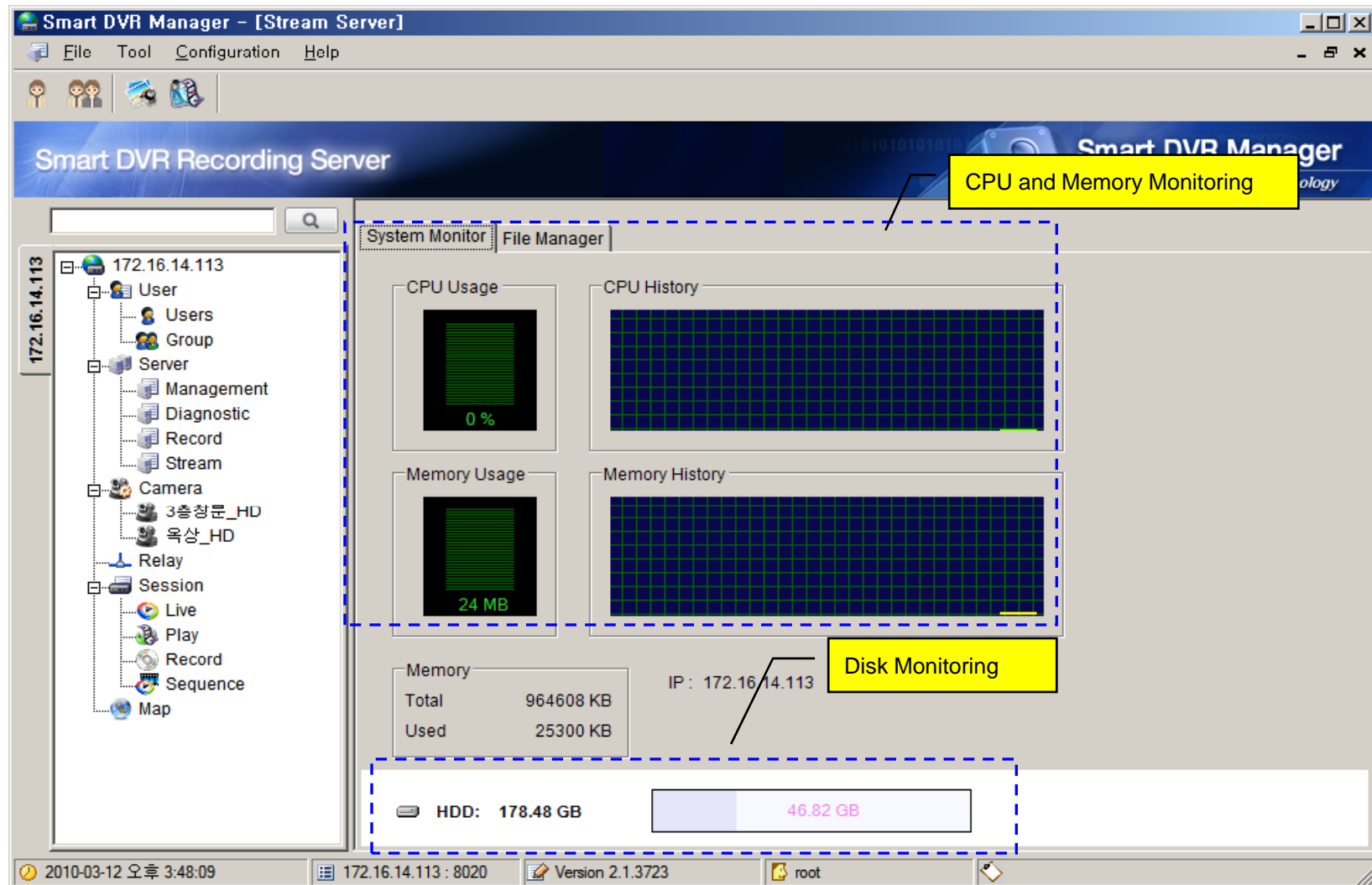
Searching Rule All Clear

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 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 'Memory' section, which includes a table of memory statistics and an IP address.
- HDD Monitoring:** A yellow callout box points to the 'HDD' section, which shows a bar chart of disk usage.

**Memory Statistics Table:**

Memory	Value
Total	964608 KB
Used	25300 KB

**HDD Monitoring:**

HDD: 178.48 GB (46.82 GB used)

**System Information:**

- IP: 172.16.14.113
- Version: 2.1.3723
- User: root

**Navigation Tree (Left Panel):**

- 172.16.14.113
  - User
    - Users
    - Group
  - Server
    - Management
    - Diagnostic
    - Record
    - Stream
  - Camera
    - 3층청문\_HD
    - 옥상\_HD
  - Relay
  - Session
    - Live
    - Play
    - Record
    - Sequence
  - Map

# Smart DVR Manager : Schedule

**User Defined Schedule Lists**

**Add Schedule**

**Delete Schedule**

**Weekly and Daily Time 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**

**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 Media Manager' application. A 'Download' dialog box is open, showing a list of files to be downloaded from a remote database. The dialog also includes progress bars for file transfer and conversion, and options for file conversion and deletion.

**Download Dialog - File List:**

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...

**Download Dialog - File Transfer Progress:**

파일 이름	파일 크기
20100312064746.pma	8,890 KB
20100312024507.pma	214,637 KB
2010031201065...	1,424,769 KB
2010031201025...	90,190 KB
2010031108373...	286,144 KB

**Download Dialog - File Conversion Progress:**

파일 이름	파일 크기
20100312064746.pma	8,890 KB
20100312024507.pma	214,637 KB
2010031201065...	1,424,769 KB
2010031201025...	90,190 KB
2010031108373...	286,144 KB

**Annotations:**

- Recorded File List for File Backup**  
: File Name, Recording Duration Time, File Size, File Backup Status
- 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 shows a street scene with the text '경인선 도화-3 (전환중)' overlaid. The VLC status bar at the bottom indicates 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 shows the 'Smart DVR Manager' application window. A central dialog box titled '녹화파일 속성' (Record File Attribute) is open, displaying the following information:

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)

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' (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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