

HD Video Conference Solution for Police-District Court

Preliminary Product Overview

(Without notice, following described technical spec. can be changed)



AddPac

AddPac Technology

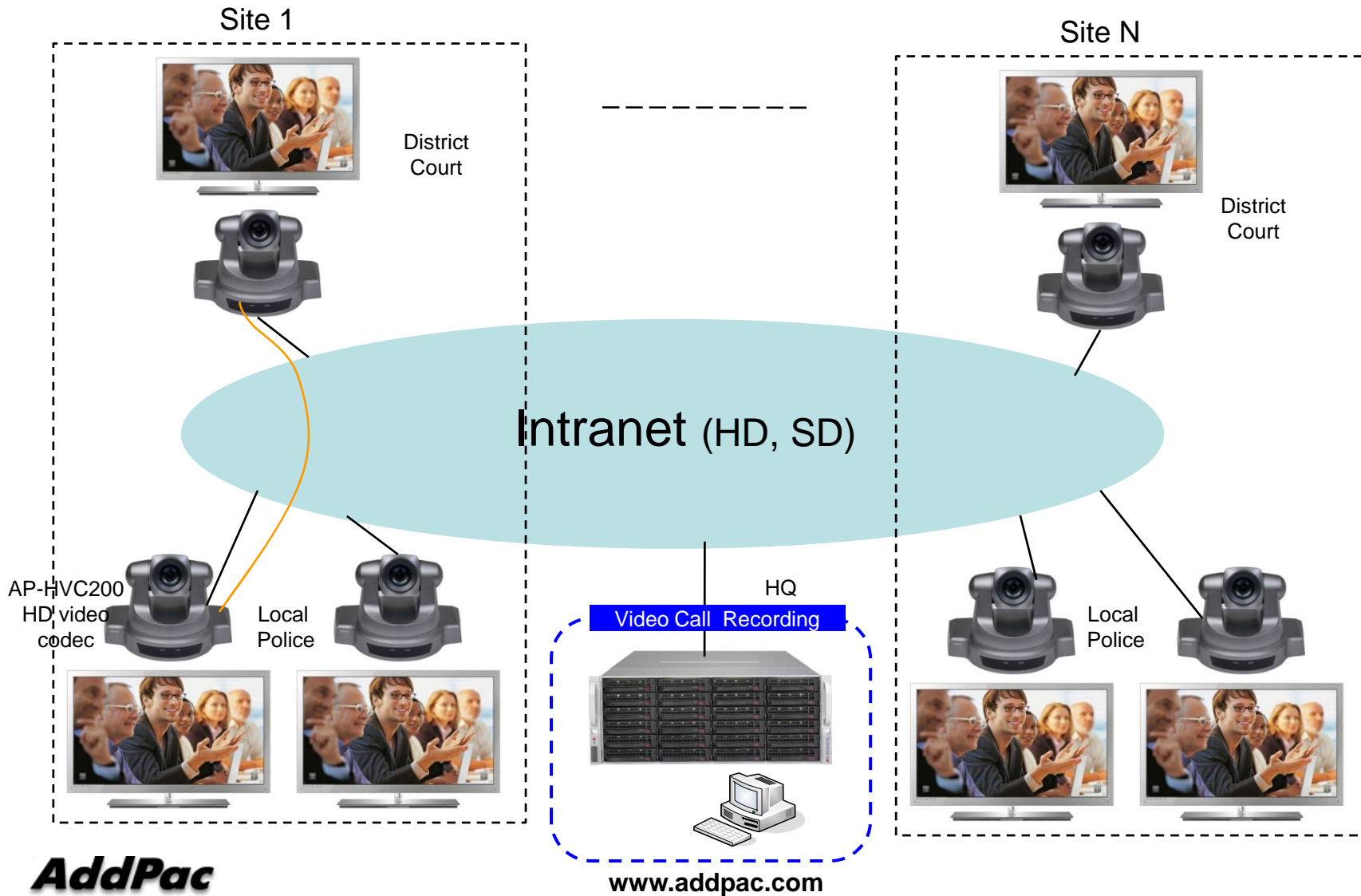
2011, Sales and Marketing

www.addpac.com

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- HD Video Conference Service Diagram
- Product Solution
 - AP-HVC200 HD Video Codec (One(1) Channel)
 - AP-MP100 Acoustic Echo Canceller Micro Phone for Video Conference
 - AP-NR10000 IP Video Recording Server

HD/SD Video Conference Network Diagram



AP-HVC200

One(1) Channel HD Video Codec



Contents

- Product Overview
- Benefits and Features
- Hardware Specification
- Multimedia Service
- Software Service
- Network Service and Features
- OSD Software Features
- Application Area
- Ordering Information



Product Overview

AP-HVC200 HD Video Conference Equipment

- IP based Video Conference Solution
- High-End HD Video Camera Features
- CCD Camera Sensor, 1.3Mega Pixel Camera
- Various Video Format Support
- PAN/TILT/Zoom Housing Features
- Optical 18 x Zoom Camera
- High-performance Video, Audio, and Voice Service
- Flexible Videoconferencing Deployment
- Firmware Upgradeable Architecture
- Video Solution with Outstanding Network Service Capability
- Audio/Video Privacy Protection

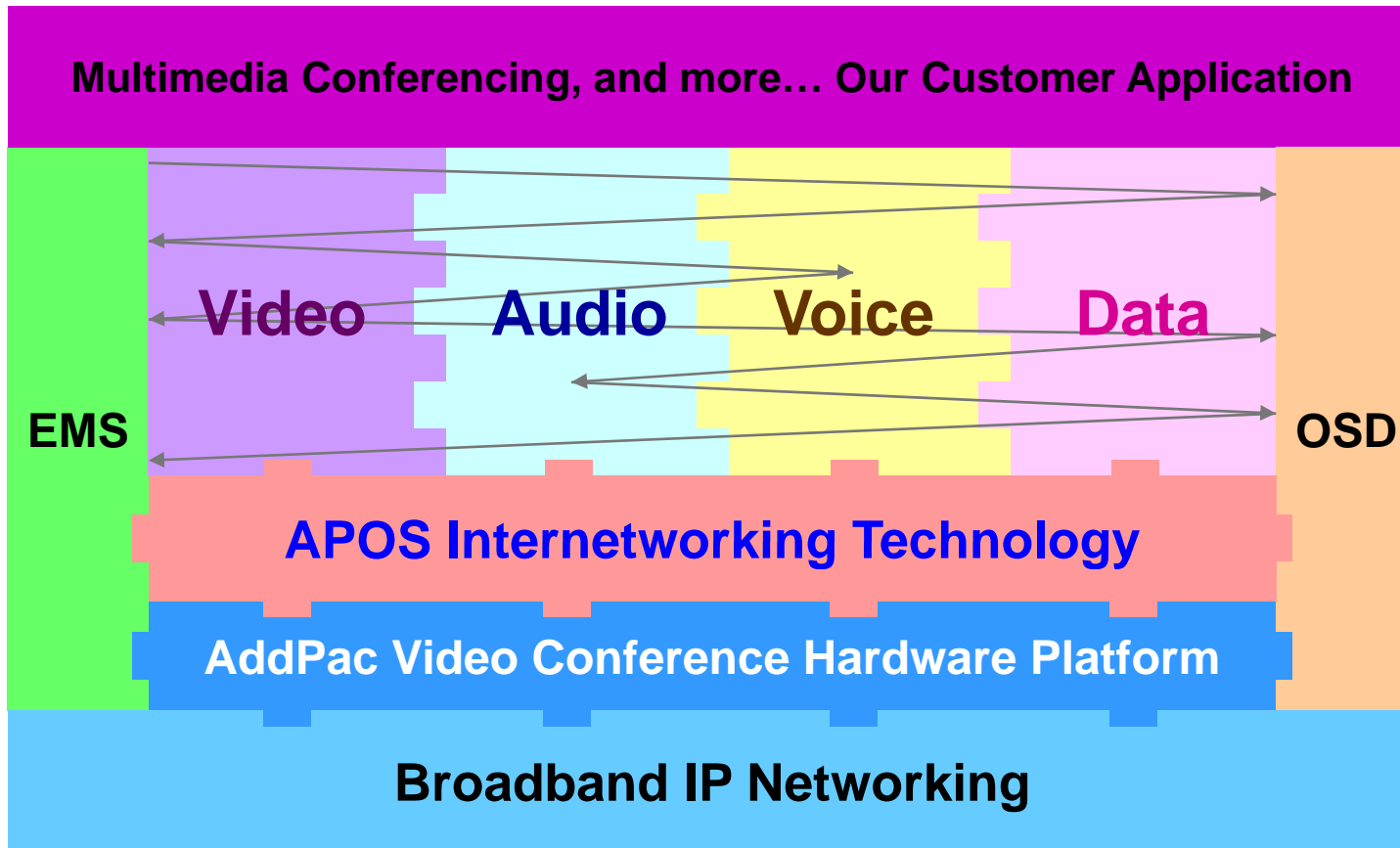
Product Highlights

AP-HVC200 HD Video Conference Equipment



Multimedia Service

AP-HVC200 HD Video Conference Equipment



- APOS : AddPac Internetworking Operating System
- OSD : On- Screen Display
- EMS : Element Management System

Benefits and Features

AP-HVC200 HD Video Conference Equipment

- Various Video Output Interface
 - Composite (RCA) , Component (Y, Pb, Pr), HDMI
- High-performance Video Codec Support
 - H.264, MPEG4
- Powerful Image Resolution Support
 - CIF(352x288), QVGA(320x240), HVGA(640x240), VGA(640x480), 4CIF(704x576), 720P(1280x720)
- Up to 30fps with HD-Resolution(H.264)
- Video Conference Call Support (External MCU)
- SIP, H.323 Signaling Support
- Rate Control for Video Traffic QoS
 - Ensuring Optimized Quality
 - Frame Rate with Limited Bandwidth
- High-end Error Resilient Against Various Packet Error

Hardware Specification

AP-HVC200 HD Video Conference Equipment

High
Performance
CPU

High-end
DSP

- High-end Programmable DSP Hardware Architecture
- Video Output Interface
 - Composite RCA Out, Component Out, HDMI Out
- Audio Interface
 - Stereo RCA Type Audio Output Connector (Left, Right)
 - Stereo Audio Input(3.5mm) for External MIC input
- Network Interface
 - One(1) 10/100Mbps Fast Ethernet(RJ45)
 - One(1) RS-232C Interface (RJ45) for Console
- USB Interface
 - USB 2.0 Interface for Mouse, etc
- Voice Interface
 - FXS Interface for Analog Phone, Analog Conference Phone, etc

Hardware Specification

AP-HVC200 HD Video Conference Equipment

High
Performance
CPU

High-end
DSP

- Camera Specification
 - 1/3 Type Solid State Progressive Scan CCD
 - HD : 1280(H) x 720(V), 30/25/22.5fps
 - Auto Focus 18 x Optical Zoom, 12 x Digital Zoom
 - 1.3 Mega Pixel
 - Wide Angle Lens for Video Conference Application
 - PELCO-D Control Protocol
 - Position Preset
- Video I/O Interface
 - Composite RCA Out, Component Out, HDMI Out Interface
- RS232/RS485 Interface for External PTZ Control
- IR Interface for Remote Control (Remocon)
- Power ON/OFF Switch

Hardware Specification

AP-HVC200 HD Video Conference Equipment

High
Performance
CPU

High-end
DSP



IR Sensor & Status Indication Area

AddPac

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Hardware Specification

AP-HVC200 HD Video Conference Equipment

High Performance
CPU

High-end
DSP



AddPac

RS232C
Console Port

Audio In/Output
www.addpac.com

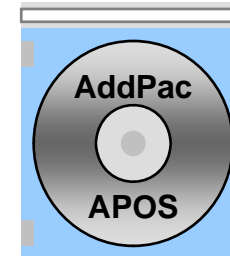
CVBS Output

VoIP FXS Interface

Software Service

AP-HVC200 HD Video Conference Equipment

- Built-in APOS Internetworking Software
 - Scalability, Functionality, and Stability Features
 - Video Traffic QoS Control
- Programmable Video, Audio, and Voice Services
 - Video Codes, Audio, and Voice Codec
- Firmware Upgradeable Architecture
- OSD (On-screen Display) Function Support
- Industry Standard IP based Network Protocol Features



Network Service and Features

AP-HVC200 HD Video Conference Equipment

- **Basic Routing**
 - Static Routing (IPv4)
 - Static / DHCP / PPPoE
 - VRRP (Virtual Redundancy Routing Protocol)
- **Network Management**
 - SNMPv2/SNMPv3 Support
 - Standard & Enterprise SNMP MIB Support
 - Web Based Management using HTTP/HTTPS
 - Console / Telnet / Rlogin / SSH Interface
- **Security Function**
 - Standard & Extended IP Access List
 - HTTPS / SSH Interface
 - Auto-disconnect Telnet/Console Session
 - Access Control for Local Service (FTP/Telnet/HTTP.)
 - Enable/Disable Network Services
 - Multi-Level User Account Management

Network Service and Features

AP-HVC200 HD Video Conference Equipment

- Operation & Management
 - Configuration Backup & Restore for APOS Managements
 - Use Multiple APOS™ and Configuration
 - Auto Upgrade via HTTP/HTTPS
 - Debugging, System Auditing, and Diagnostics Support
 - FTP/TFTP/Telnet/SSH Server and Client
 - HTTP Server
 - Remote logging using Syslog
 - Local System Logging (Local HDD model)
 - RADIUS Authentication / Account
- Other Scalability Features
 - Network time Protocol (NTP) Support
 - Cisco Style Command Line Interface (CLI)
 - DHCP Server & Relay Functions
 - DNS Server

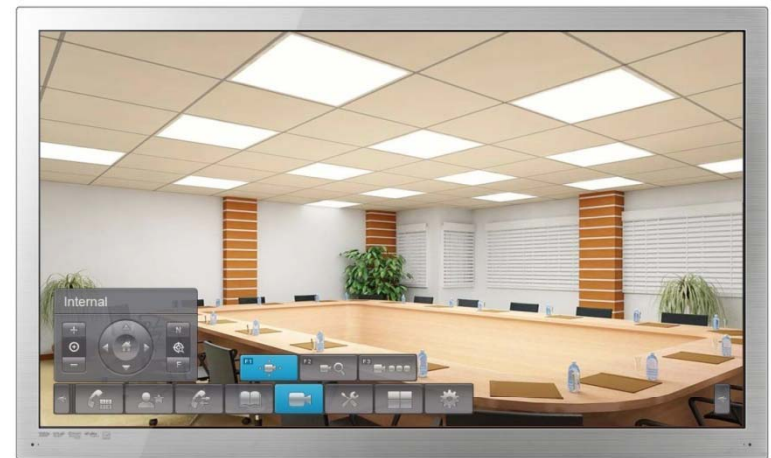
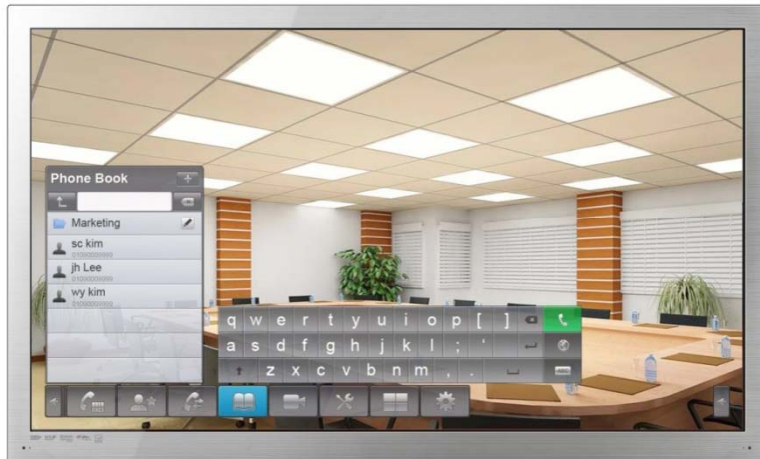
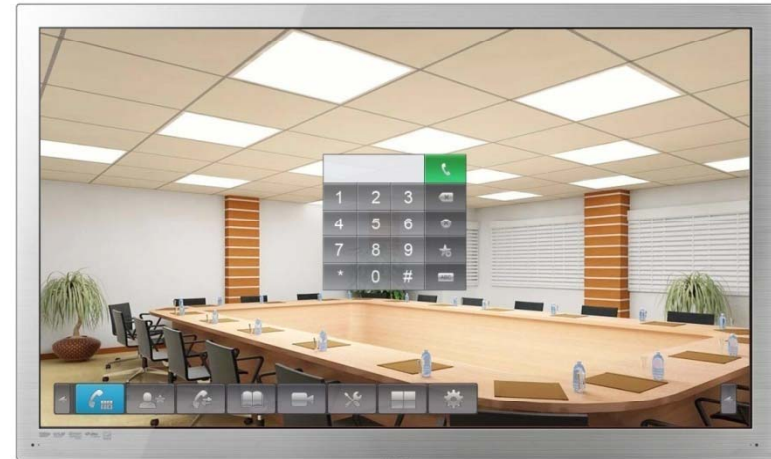
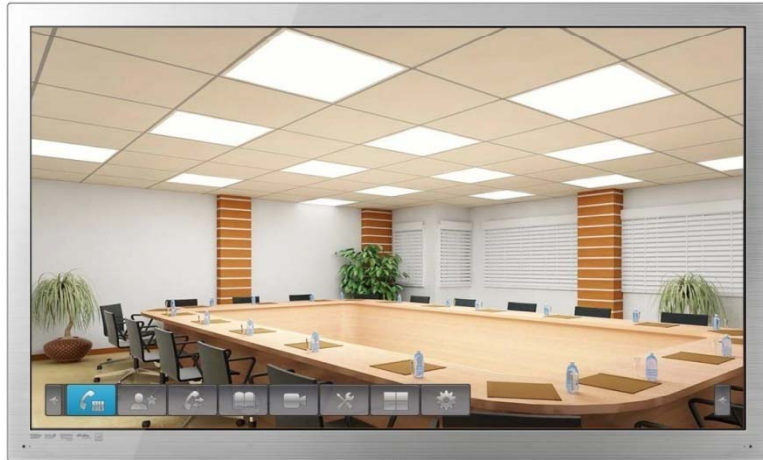
OSD Software Features

AP-HVC200 HD Video Conference Equipment OSD Service

- Menu Control Mode
- Dial Mode
- Conversation View Mode
- Display Layout Call Mode
- Key Pad Mode for Dialing Number
- Phone Book OSD
- Phone Book : New Contact
- Recent Call OSD
- Tools OSD Mode
- Codec Configuration : IP address, etc
- Status Bars OSD
- PTZ Control OSD

OSD Software Features (Example)

AP-HVC200 HD Video Conference Equipment OSD Service



AP-HVC200 HD Video Conference Equipment

Application Area

- Audio/Video Real-time Broadcasting
- Video on Demand Application
- Video Telephony
- Video Conference

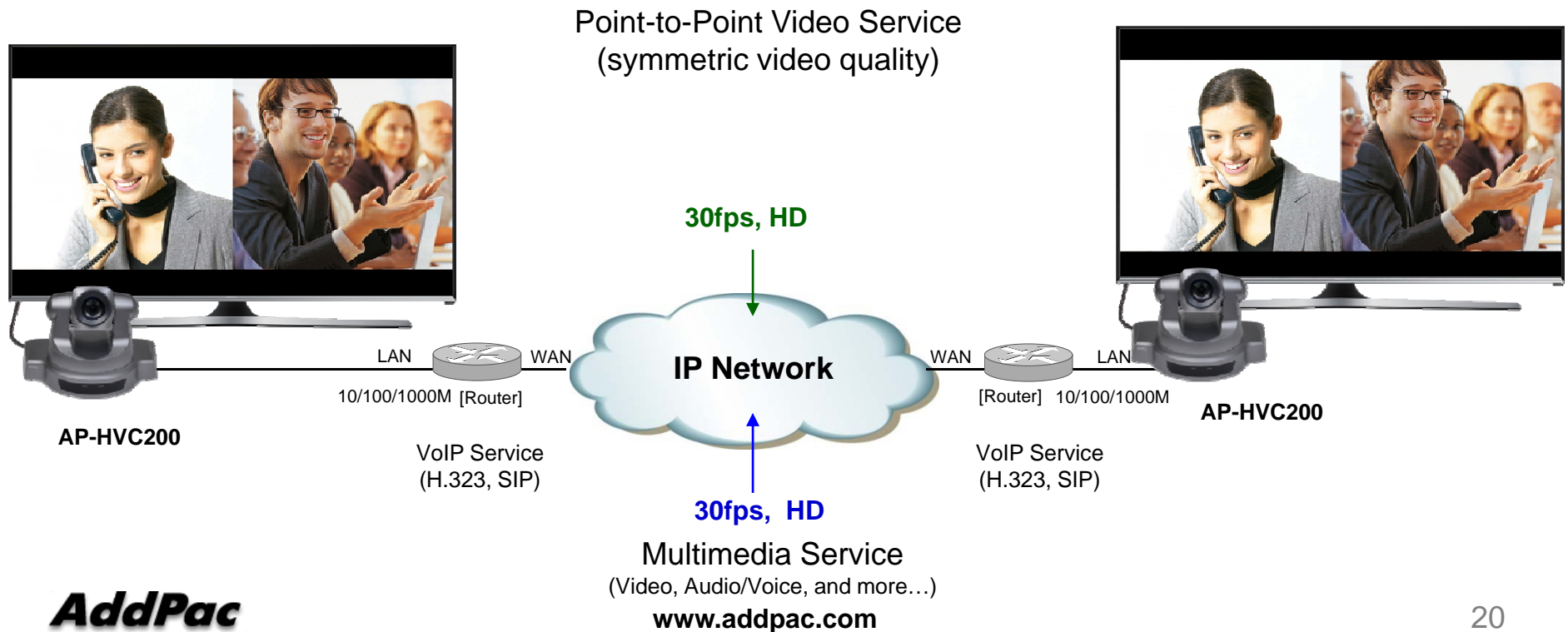


Video Telephony Application

AP-HVC200 HD Video Conference Equipment

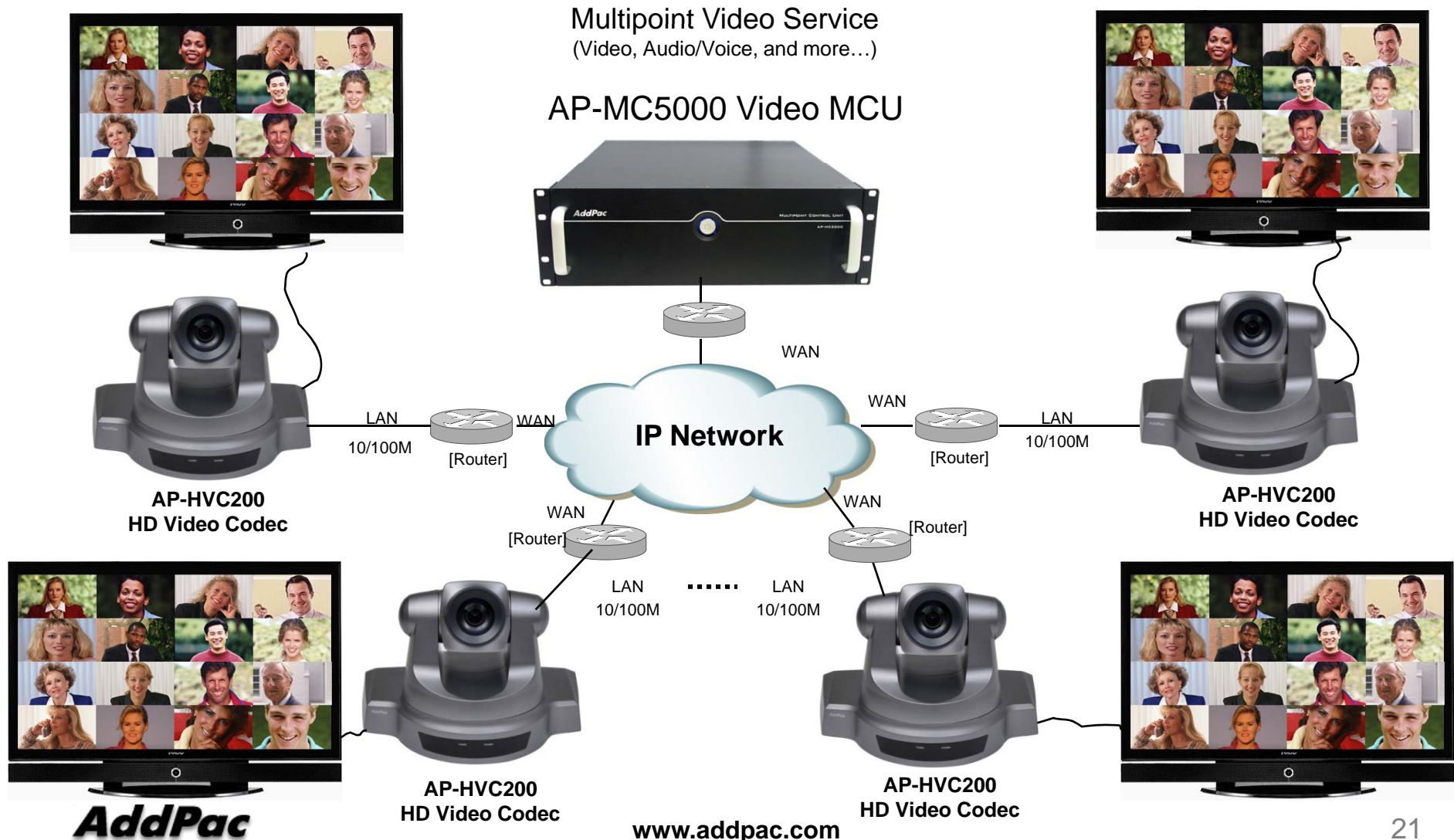
H.264, 720P, 30frame

H.264, 720P, 30frame



Video Conference

AP-HVC200 HD Video Conference Equipment



AP-MP100

Acoustic Echo Canceller Micro Phone



Contents

- Product Overview
- Hardware Specification
- Application Area
- Ordering Information



Product Overview

AP-MP100 AEC Micro Phone

- Acoustic Echo Canceller Micro Phone Solution for Video Conference
- Wide band(16bits, 16kHz sampling) operation
- Support CNG(comport noise generation) to generate white noise
- Support double talk
- Noise reduction algorithm
- Support HDMI speaker mode & analog speaker mode
- S/W upgrade by y-modem protocol via RS232C
- Support CLI(Command Line Interface) to configure AEC parameters
- Voice Activity Detection
- Mute button
- Status LED (Mute, Active)
- Compact Design & Die Casting
- Power On/Off Switch

Hardware Specification

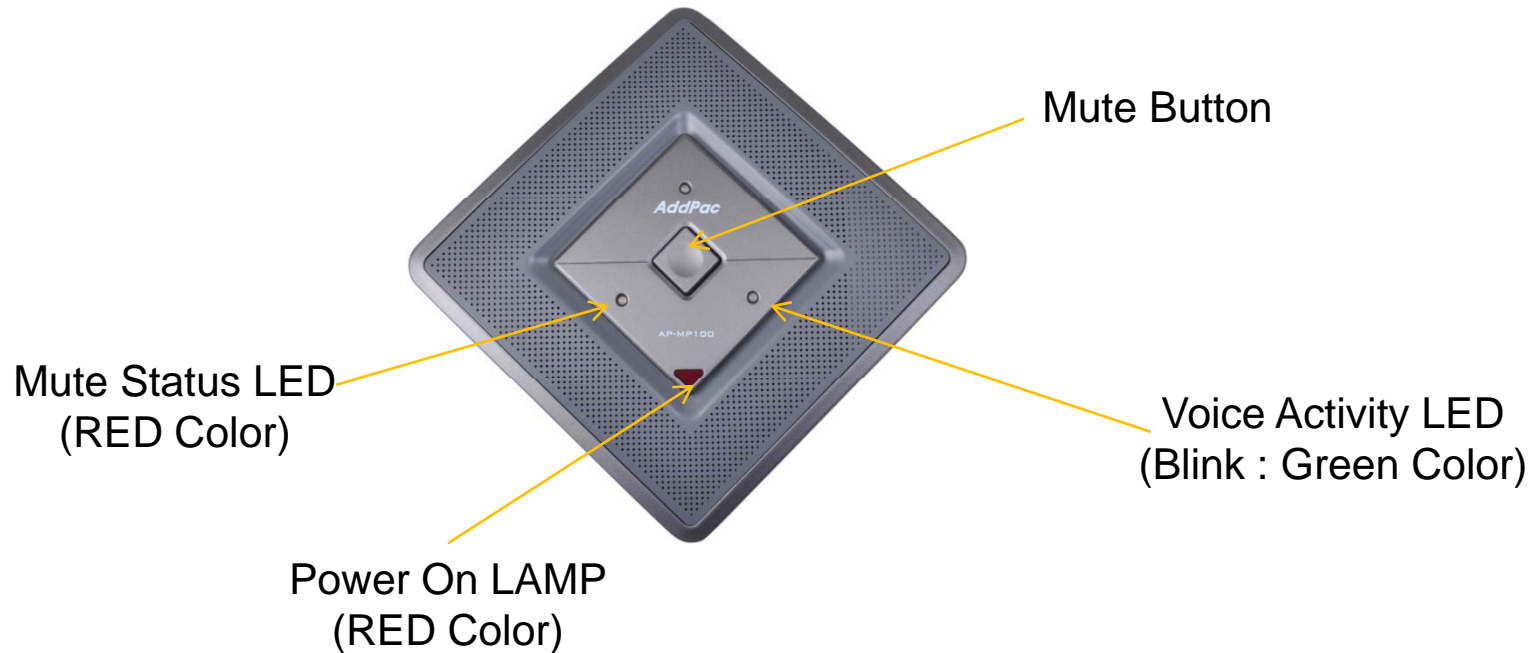
AP-MP100 AEC Micro Phone

- DSP based Acoustic Echo Canceller Hardware Architecture
- Status LED (Mute, Active)
- Audio Mute Key Support
- RS232C based Firmware Upgrade Architecture
- Compact Design & Die Casting
- Power On/Off Switch
- MIC Interface
 - Power Input
 - Audio Output



Hardware Specification

AP-MP100 AEC Micro Phone



Hardware Specification

AP-MP100 AEC Micro Phone



AP-MP100 AEC Micro Phone

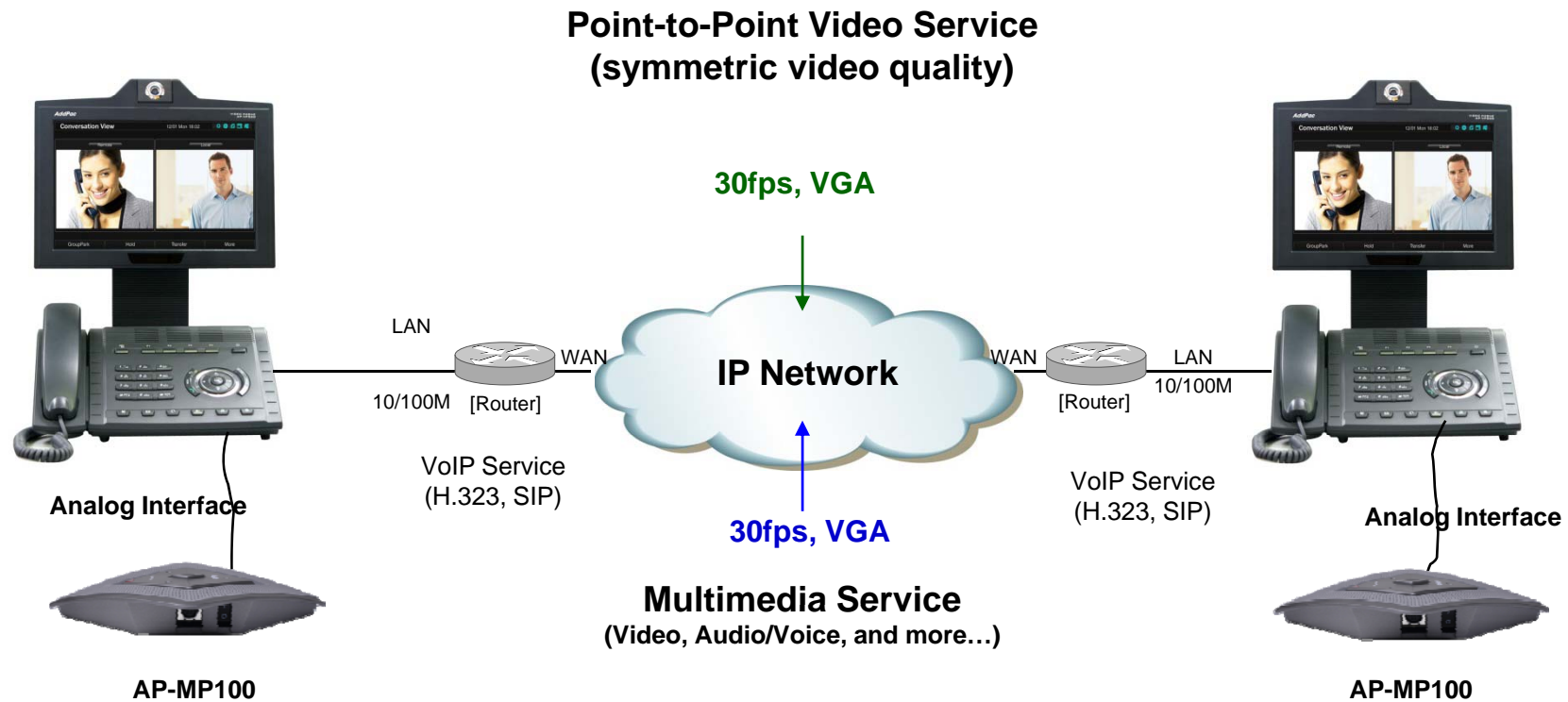
Application Area

- Video Telephony
- Video Conference



Video Telephony Application

AP-MP100 AEC Micro Phone

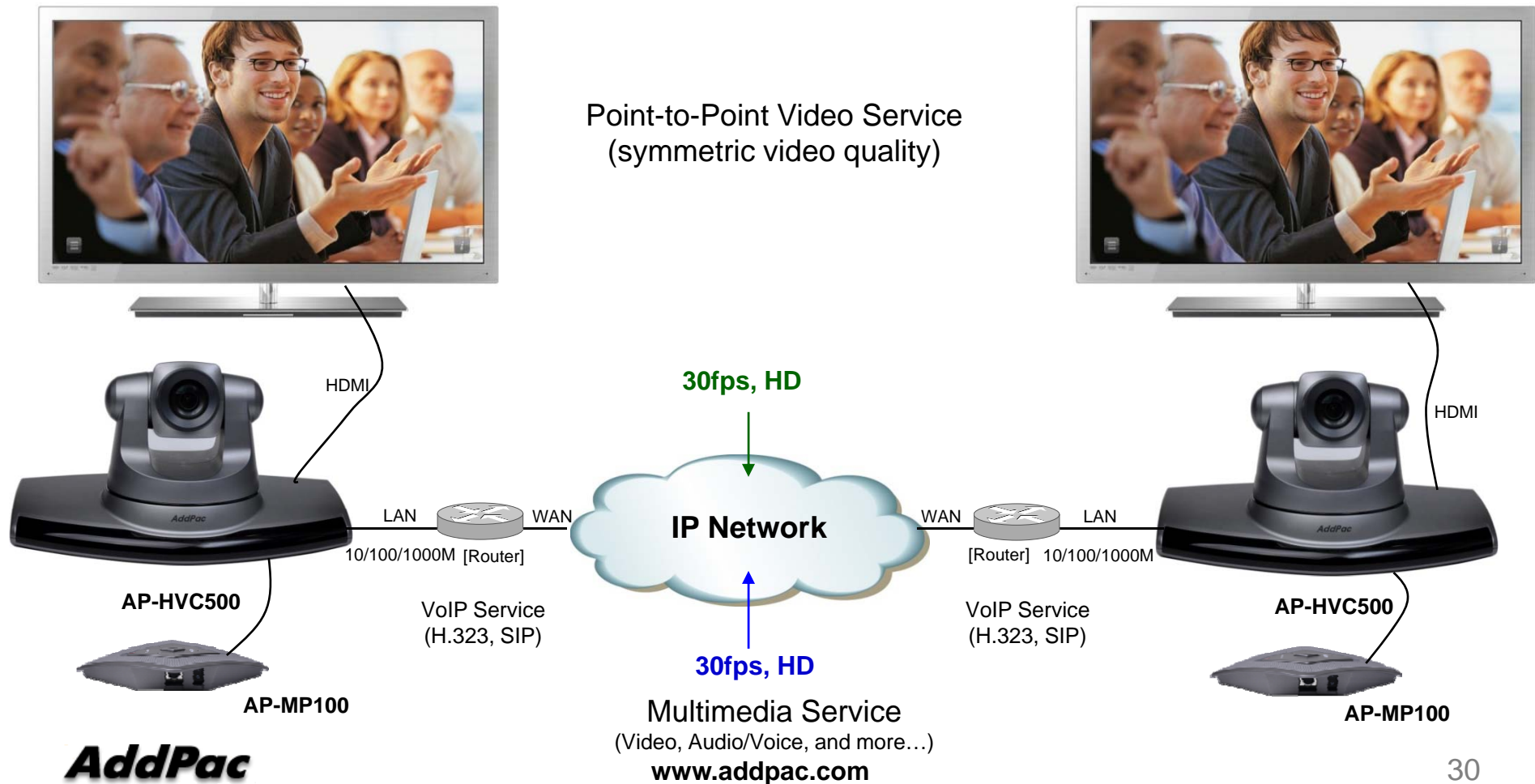


Video Conference

AP-MP100 AEC Micro Phone

H.264, 720P, 30frame

H.264, 720P, 30frame



AP-NR10000

IP Video Recording Server



Contents

- Product Overview
- Product Highlight
- Hardware Specification
- Software Service
- Smart Recording Manager Program
- Application Service
- Ordering Information

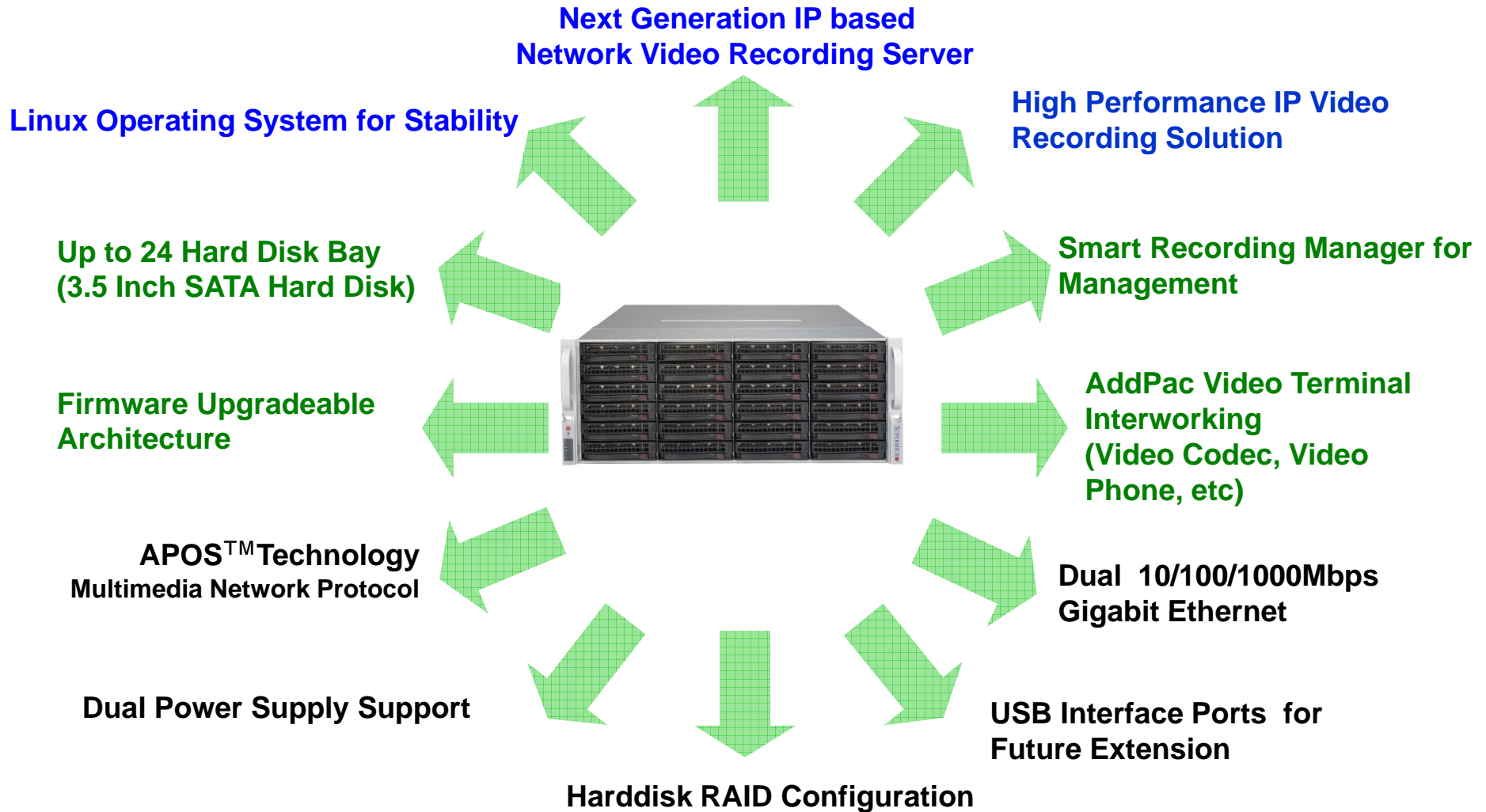
Product Overview

AP-NR10000 IP Video Recoding Server

- IP based Network Video Recording Server
- Linux Operating System
- Powerful Management and User Friendly Features
- High-performance Video Recording Service
- External AddPac Video Terminal (Ex: Video Phone) Interworking Support
- Firmware Upgradeable Architecture
- 24 Harddisk Bay
- Harddisk Raid Support (LSISAS RAID 0,1,5,6,10,50,60)
- Dual Power Supply
- SATA2/SATA3 Harddisk Support

Product Highlights

AP-NR10000 IP Video Recording Server



Hardware Specification

AP-NR1000 IP Video Recording Server

- High Performance Computing Power
- System Hardware Specification
 - Single socket R3 (LGA 2011) supports Intel® Xeon® processor E5-2600 v4†/ v3 and E5-1600 v4†/ v3 family
 - Up to 1TB† ECC 3DS LRDIMM , up to DDR4- 2400†MHz ; 8x DIMM slots
 - Intel® C612 Express PCH
 - 24-port 4U SAS2 6Gbps single-expander backplane, support up to 24x 3.5-inchSAS2/SATA3 HDD
 - 1U 920W Redundant Platinum Level Power Supply
 - 7 full-height & full-length expansion slot(s)
 - 3 x 8cm hot-swap redundant PWM cooling fan(s)
 - 7x PCI-E slots total: 2 PCI-E 3.0 x8, 2 PCI-E 3.0 x8 (in x16), 2 PCI-E 3.0 x4 (in x8) or 1 x8 + 1 x0 (auto-switch), & 1 PCI-E 2.0 x4 (in x8)
 - 4x USB 3.0 ports, 8x USB 2.0 ports
 - Intel® i210 Dual port GbE LAN
- Processor : Intel® Xeon E5-2620 v4 (8 Core, 20M Cache, 2.1GHz)
- Memory : 16GB DDR4 ECC REG 2133MHz PC4-17000
- Raid : AOC-S3108L-H8iR (LSISAS RAID 0,1,5,6,10,50,60)

Hardware Specification

AP-NR10000 IP Voice Call Recording Server

AP-NR10000 Front Side



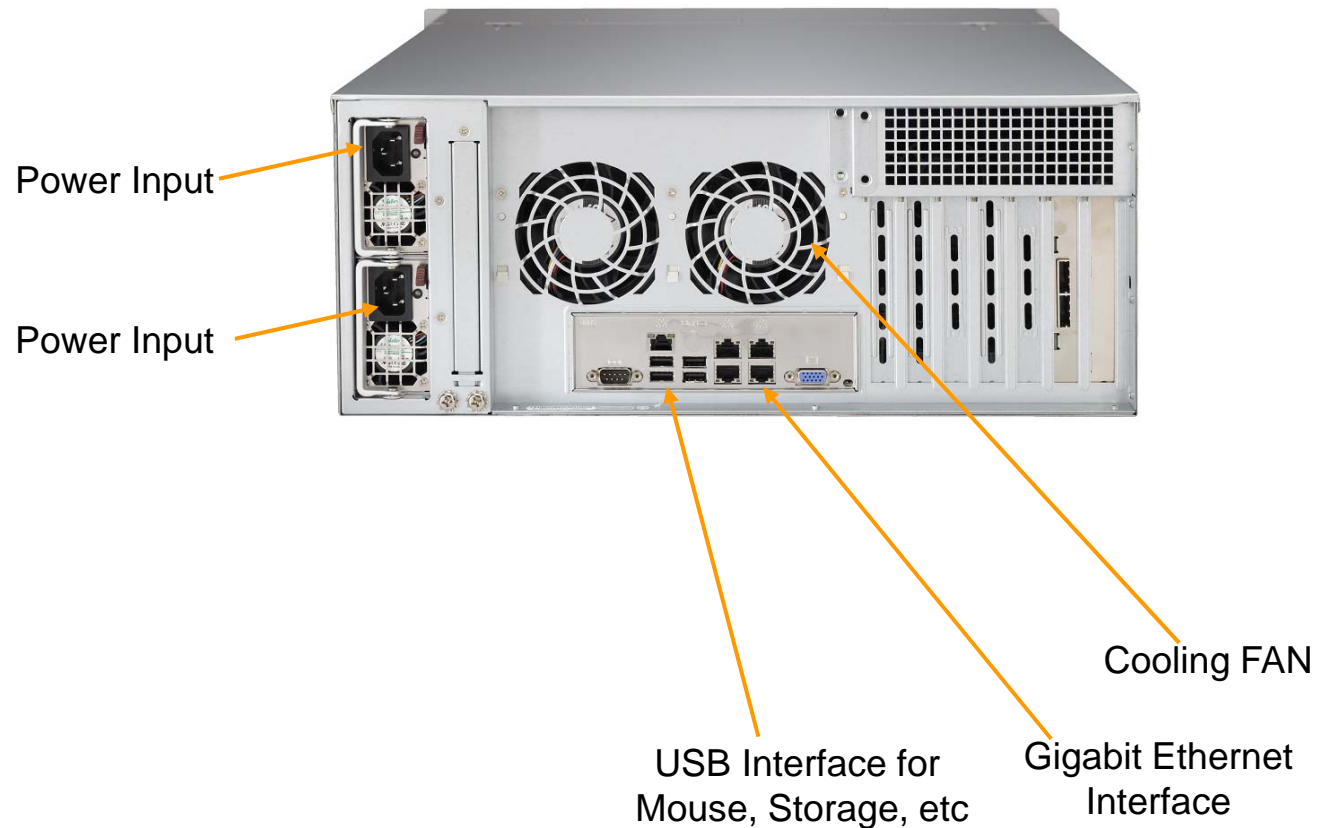
Power On/Off Switch

Harddisk bay

Hardware Specification

AP-NR10000 IP Video Recording Server

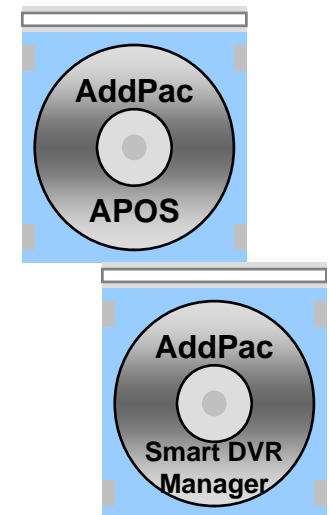
AP-NR10000 Back Side



Software Service

AP-NR10000 IP Video Recording Server

- **Built-in AddPac Internetworking Software**
 - Scalability, Functionality, and Stability Features
 - Advanced Network Video Recording & Live Streaming Features
- **Firmware Upgradeable Architecture**
- **Industry Standard Network Protocol Features**
- **Highly User Friendly Management Features**
 - PC based Window Program
 - Smart Recording Manager



Smart Recording Manager Program

AP-NR10000 IP Video Recording Server

- User Management (registration/modify/delete/search)
- Recording Server Management
- Recording File Management
- Recording File Play with VLC application
- Export Recording History to File(EXEL)
- Live Call Monitoring (Play)
- Event Management
- Recording Board Management
- Smart Recording File Manager

User Management

Smart Recording Manager

File Record Management Advanced Configuration Help

Smart Recording Manager

Users [NR5000:172.17.50.200]

User Name	ID	Level	Description
root	root	Administrator	System Administrator
Administrator	administrator	Administrator	Addpac Administrator

New Manager Registration

Manager Information Modification

Manager Delete

Status

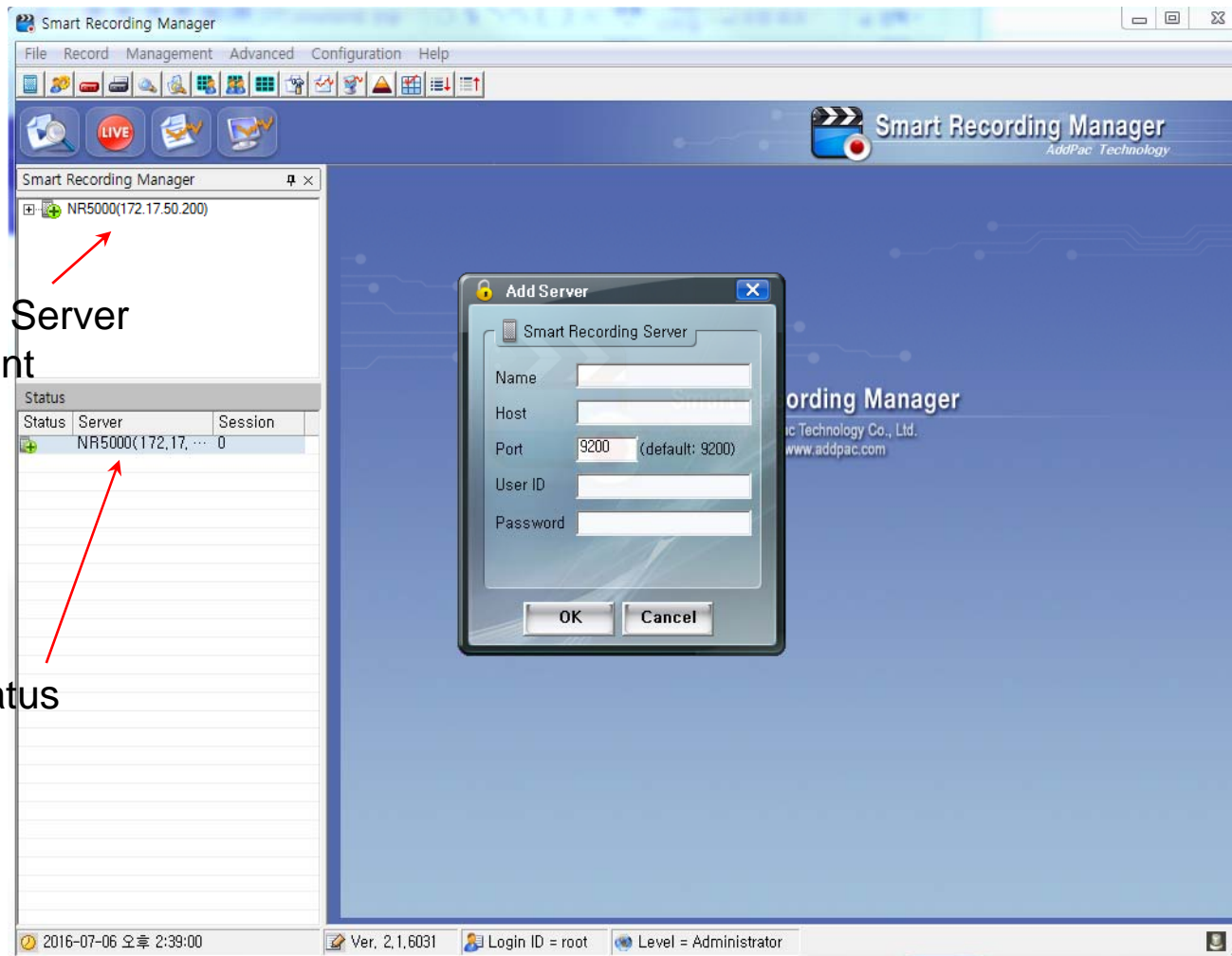
Status	Server	Session
+	NR5000(172.17.50.200)	0

2016-07-06 오후 2:44:40 Ver. 2.1.6031 User Id = root Level = Administrator

Recording Server Management

*Recording Server Management

*Server Status Information



Recording Server Status Monitoring

The screenshot displays the Smart Recording Manager interface. The main window shows the Smart Recording Server status for IP 172.17.50.200, indicating it is running. A configuration window for the Client Session List is open, showing settings for Max Session (10) and Keep Alive Interval (5 sec). A separate window displays the Client List table, which contains one entry for user 'root' with IP 172.16.1.19, port 49988, access time 2016-07-06 14:42:00, and duration 00:07:34. A red arrow points to this entry with the label 'Client List'.

No.	User	IP Address	Port	Access Time	Duration
1	root	172.16.1.19	49988	2016-07-06 14:42:00	00:07:34

Recording File Management

The screenshot displays the Smart Recording Manager interface. The main window shows a search results table with columns: No., Call ID, Source IP, Rec StartTime, Rec EndTime, Rec Duration, Call Duration, Calling Num, Calling User, and Called Num. A search filter dialog box is open in the foreground, allowing users to filter records by time and other criteria.

No.	Call ID	Source IP	Rec StartTime	Rec EndTime	Rec Duration	Call Duration	Calling Num	Calling User	Called Num
2	2	172.16.9.29	2016-07-05 10:30:16	2016-07-05 10:30:16	00:00:00	00:00:01	1000		3000
2	3	172.16.9.29	2016-07-05 12:47:45	2016-07-05 12:47:45	00:00:00	00:01:00	1000		3000
3	6	172.16.9.29	2016-07-05 12:50:28	2016-07-05 12:50:28	00:00:00	00:00:00	1000		3001
4	7	172.16.9.29	2016-07-05 12:50:40	2016-07-05 12:50:40	00:00:00	00:00:16	1000		3001
5	9	172.16.9.29	2016-07-05 12:51:05	2016-07-05 12:51:05	00:00:00	00:02:03	1000		3001
6	10	172.16.9.29	2016-07-05 12:51:09	2016-07-05 12:51:09	00:00:00	00:01:05	1000		3000
7	12	172.16.9.29	2016-07-05 12:53:09	2016-07-05 12:53:09	00:00:00	00:01:03	1000		3001
8	14	172.16.9.29	2016-07-05 14:10:01	2016-07-05 14:10:01	00:00:00	00:00:43	1000		3001
9	15	172.16.9.29	2016-07-05 14:11:27	2016-07-05 14:11:27	00:00:00	00:01:02	1000		3001
10	16	172.16.9.29	2016-07-05 14:12:42	2016-07-05 14:12:42	00:00:00	00:00:11	1000		3001
11	17	172.16.9.29	2016-07-05 14:13:03	2016-07-05 14:13:03	00:00:00	00:00:13	1000		3001
12	18	172.16.9.29	2016-07-05 14:13:24	2016-07-05 14:13:24	00:00:00	00:00:10	1000		3001
13	19	172.16.9.29	2016-07-05 16:53:52	2016-07-05 16:53:54	00:00:02	00:37:33	1000		3001
15	17:36:21		00:00:00	00:00:05	1000				3001
15	17:39:37		00:00:00	00:00:22	1000				3001
15	17:42:57		00:00:00	00:00:37	1000				3001
15	17:48:28		00:00:00	00:00:16	1000				3001
15	18:00:25		00:00:35	00:00:39	1000				3001
16	09:23:08		00:00:13	00:00:19	1000				3001
16	09:31:32		00:02:13	00:02:18	1000				3001
16	09:47:12		00:00:00	00:00:00	1000				3001
16	09:48:11		00:00:46	00:00:49	1000				3000
16	09:49:08		00:00:43	00:00:46	1000				3000
16	09:51:31		00:00:14	00:00:17	1000				3000
16	10:42:17		00:00:14	00:00:15	1000				3000
16	13:46:19		00:00:04	00:00:06	1000				3000

Search Filter Dialog:

- Record Time: Start Time: 2016-07-05 00:00:00, End Time: 2016-07-06 23:59:59
- Filter: 5 rows with Filter Name, Rule (IsExactly), and Search fields.
- Buttons: OK, Cancel, Init Filter
- Checkbox: Recording Service Unavailable Files (not G711U codec) - It may take a long time.

System Status: 2016-07-06 2:48:56, Ver. 2.1.6031, User Id = root, Level = Administrator

Recording File Play with VLC application

The screenshot displays the Smart Recording Manager application interface. The main window shows a list of recordings with the following data:

No.	Call ID	Source IP	Rec StartTime	Rec EndTime	Rec Duration	Call Duration	Calling Num	Ca
1	25	172.16.9.29	2016-07-06 09:22:55	2016-07-06 09:23:08	00:00:13	00:00:19	1000	
2	26	172.16.9.29	2016-07-06 09:29:19	2016-07-06 09:31:32	00:02:13	00:02:18	1000	
3	27	172.16.9.29	2016-07-06 09:47:12	2016-07-06 09:47:12	00:00:00	00:00:00	1000	
4	28	172.16.9.29	2016-07-06 09:47:25	2016-07-06 09:48:11	00:00:46	00:00:49	1000	
5	29	172.16.9.29	2016-07-06 09:48:25	2016-07-06 09:49:08	00:00:43	00:00:46	1000	
6	30	172.16.9.29	2016-07-06 09:51:17	2016-07-06 09:51:31	00:00:14	00:00:17	1000	
7	31	172.16.9.29	2016-07-06 10:42:03	2016-07-06 10:42:17	00:00:14	00:00:15	1000	
8	1	172.16.9.29	2016-07-06 13:46:15	2016-07-06 13:46:19	00:00:04	00:00:06	1000	
9	3	172.16.9.29	2016-07-06 15:13:06	2016-07-06 16:42:14	01:29:08	01:29:12	1000	
10	4	172.16.9.29	2016-07-06 16:42:24	2016-07-06 16:42:37	00:00:13	00:00:11	1000	
11	5	172.16.9.29	2016-07-06 16:42:45	2016-07-06 16:43:09	00:00:24	00:00:25	1000	
12	6	172.16.9.29	2016-07-06 16:43:26	2016-07-06 16:44:02	00:00:36	00:00:38	1000	

Two video playback windows are shown in the foreground. The left window, titled "2016-07-06 16:43:26", shows a woman in an office setting. The right window, titled "AddPac Technology - 0000620160706074326-000041--M.avi - ...", shows a man in an office setting. The VLC player interface at the bottom includes playback controls and a progress bar.

Live Call Monitoring

The screenshot displays the Smart Recording Manager interface. At the top, there is a menu bar with 'File', 'Record', 'Management', 'Advanced', 'Configuration', and 'Help'. Below the menu is a toolbar with various icons, including a 'LIVE' indicator. The main area features a tree view on the left for navigation, a central table of recorded calls, and a status section at the bottom left.

No.	Call ID	Source IP	Rec StartTime	Initiated Time	Call Duration	Calling Num	Calling User	Called Num	Called User	AI
1	25	172.16.9.29	2016-07-06 09:22:55	2016-07-06 09:23:08	00:00:13	1000		3001		
2	26	172.16.9.29	2016-07-06 09:29:19	2016-07-06 09:31:32	00:02:13	1000		3001		
3	27	172.16.9.29	2016-07-06 09:47:12	2016-07-06 09:47:12	00:00:00	1000		3001		
4	28	172.16.9.29	2016-07-06 09:47:25	2016-07-06 09:48:11	00:00:46	1000		3000		
5	29	172.16.9.29	2016-07-06 09:48:25	2016-07-06 09:49:08	00:00:43	1000		3000		
6	30	172.16.9.29	2016-07-06 09:51:17	2016-07-06 09:51:31	00:00:14	1000		3000		
7	31	172.16.9.29	2016-07-06 10:42:03	2016-07-06 10:42:17	00:00:14	1000		3000		
8	1	172.16.9.29	2016-07-06 13:46:15	2016-07-06 13:46:19	00:00:04	1000		3000		

Below the table, there are two VLC media player windows showing live video feeds. The left window shows a man in a white shirt and tie, and the right window shows a woman in a white top and glasses. Both windows have a red arrow pointing to them from the 'LIVE' button in the main interface.

Export Recording History

Smart Recording Manager - [Record Search [NR5000:172.17.50.200]]

File Record Management Advanced Configuration Help

Smart Recording Manager

NR5000(172.17.50.200)

- User Management
- Device Management
- Recording Management
- Record Search
- Record Session
- Recording Board
- Event & Monitoring
- System Management

Status

Status	Server	Session
+	NR5000(172.17. ...	0

No.	Call ID	Source IP	Rec StartTime	Rec EndTime
1	2	172.16.9.29	2016-07-05 10:30:16	2016-07-05 10:30:16
2	3	172.16.9.29	2016-07-05 12:47:45	2016-07-05 12:47:45
3	6	172.16.9.29	2016-07-05 12:50:28	2016-07-05 12:50:28
4	7	172.16.9.29	2016-07-05 12:50:40	2016-07-05 12:50:40
5	9	172.16.9.29	2016-07-05 12:51:05	2016-07-05 12:51:05
6	10	172.16.9.29	2016-07-05 12:51:09	2016-07-05 12:51:09
7	12	172.16.9.29	2016-07-05 12:53:09	2016-07-05 12:53:09
8	14	172.16.9.29	2016-07-05 14:10:01	2016-07-05 14:10:01
9	15	172.16.9.29	2016-07-05 14:11:27	2016-07-05 14:11:27
10	16	172.16.9.29	2016-07-05 14:12:42	2016-07-05 14:12:42
11	17	172.16.9.29	2016-07-05 14:13:03	2016-07-05 14:13:03
12	18	172.16.9.29	2016-07-05 14:13:24	2016-07-05 14:13:24
13	19	172.16.9.29	2016-07-05 16:53:52	2016-07-05 16:53:52
14	20	172.16.9.29	2016-07-05 16:53:52	2016-07-05 16:53:52
15	21	172.16.9.29	2016-07-05 16:53:52	2016-07-05 16:53:52
16	22	172.16.9.29	2016-07-05 16:53:52	2016-07-05 16:53:52
17	23	172.16.9.29	2016-07-05 17:48:28	2016-07-05 17:48:28
18	24	172.16.9.29	2016-07-05 17:59:50	2016-07-05 18:00:25
19	25	172.16.9.29	2016-07-06 09:22:55	2016-07-06 09:23:08
20	26	172.16.9.29	2016-07-06 09:29:19	2016-07-06 09:31:32
21	27	172.16.9.29	2016-07-06 09:47:12	2016-07-06 09:47:12
22	28	172.16.9.29	2016-07-06 09:47:25	2016-07-06 09:48:11
23	29	172.16.9.29	2016-07-06 09:48:25	2016-07-06 09:49:08
24	30	172.16.9.29	2016-07-06 09:51:17	2016-07-06 09:51:31
25	31	172.16.9.29	2016-07-06 10:42:03	2016-07-06 10:42:17
26	1	172.16.9.29	2016-07-06 13:46:15	2016-07-06 13:46:19

Records Exporting !!! ... Cancel

73%

Export Date : 2016-07-06 오후 2:53:25

Export Count : 26

Record Date : 2016-07-05 오전 12:00:00 - 2016-07-06 오후 11:59:59

Call ID	Source IP	Record Start Time	Record End Time	Record Di	Call Durat	Calling N	Calling U	Calling S	Called Nu	Called Us	Called Slot/Port/Chann
2	172.16.9.29	2016-07-05 10:30	2016-07-05 10:30	00:00	00:00:10	00:00	0/0/0	0/0/0	3001	0/0/0	
3	172.16.9.29	2016-07-05 12:47	2016-07-05 12:47	00:00	00:00:10	00:00	0/0/0	0/0/0	3000	0/0/0	
6	172.16.9.29	2016-07-05 12:50	2016-07-05 12:50	00:00	00:00:00	00:00	0/0/0	0/0/0	3001	0/0/0	
7	172.16.9.29	2016-07-05 12:50	2016-07-05 12:50	00:00	00:00:16	00:00	0/0/0	0/0/0	3001	0/0/0	
9	172.16.9.29	2016-07-05 12:51	2016-07-05 12:51	00:00	00:00:10	00:00	0/0/0	0/0/0	3001	0/0/0	
10	172.16.9.29	2016-07-05 12:51	2016-07-05 12:51	00:00	00:00:05	00:00	0/0/0	0/0/0	3001	0/0/0	
12	172.16.9.29	2016-07-05 12:53	2016-07-05 12:53	00:00	00:00:10	00:00	0/0/0	0/0/0	3001	0/0/0	
14	172.16.9.29	2016-07-05 14:10	2016-07-05 14:10	00:00	00:00:43	00:00	0/0/0	0/0/0	3001	0/0/0	
15	172.16.9.29	2016-07-05 14:11	2016-07-05 14:11	00:00	00:01:02	00:00	0/0/0	0/0/0	3001	0/0/0	
16	172.16.9.29	2016-07-05 14:12	2016-07-05 14:12	00:00	00:00:11	00:00	0/0/0	0/0/0	3001	0/0/0	
17	172.16.9.29	2016-07-05 14:13	2016-07-05 14:13	00:00	00:00:13	00:00	0/0/0	0/0/0	3001	0/0/0	
18	172.16.9.29	2016-07-05 14:13	2016-07-05 14:13	00:00	00:00:10	00:00	0/0/0	0/0/0	3001	0/0/0	
19	172.16.9.29	2016-07-05 16:53	2016-07-05 16:53	00:00	00:37:33	00:00	0/0/0	0/0/0	3001	0/0/0	
20	172.16.9.29	2016-07-05 16:53	2016-07-05 16:53	00:00	00:00:05	00:00	0/0/0	0/0/0	3001	0/0/0	
23	172.16.9.29	2016-07-05 17:48	2016-07-05 17:48	00:00	00:00:10	00:00	0/0/0	0/0/0	3001	0/0/0	
24	172.16.9.29	2016-07-05 17:59	2016-07-05 18:00	00:35	00:00:39	00:00	0/0/0	0/0/0	3001	0/0/0	
25	172.16.9.29	2016-07-06 09:22	2016-07-06 09:23	00:13	00:00:19	00:00	0/0/0	0/0/0	3001	0/0/0	
26	172.16.9.29	2016-07-06 09:29	2016-07-06 09:31	00:23	00:02:18	00:00	0/0/0	0/0/0	3001	0/0/0	
27	172.16.9.29	2016-07-06 09:47	2016-07-06 09:47	00:00	00:00:00	00:00	0/0/0	0/0/0	3001	0/0/0	
28	172.16.9.29	2016-07-06 09:47	2016-07-06 09:48	00:04	00:00:49	00:00	0/0/0	0/0/0	3000	0/0/0	
29	172.16.9.29	2016-07-06 09:48	2016-07-06 09:49	00:04	00:00:46	00:00	0/0/0	0/0/0	3000	0/0/0	

2016-07-06 오후 2:53:25

Ver. 2.1,6031 User Id = root Level = Administrator

www.addpac.com

Event Configuration

Smart Recording Manager

File Record Management Advanced Configuration Help

Smart Recording Manager

NR5000(172.17.50.200)

- User Management
- Device Management
- Recording Management
- Recording Board
- Event & Monitoring
 - Event Configuration
 - Event Monitoring
 - System Monitoring

Status

Status	Server	Session
+	NR5000(172.17. ...	0

Event Configuration [NR5000:172.17.50.200]

Event Source

Listen Port : 514

1. Emergency
The presence of a condition that has either caused the system to become unstable or has crashed the system.

2. Error
Error events are warnings of conditions that will affect the performance of the MX.

Event Filter

* Set event filter for source.

Select / Deselect All

Category	Severity	Description
<input type="checkbox"/> recording	Warning	recording
<input type="checkbox"/> play	Warning	play
<input type="checkbox"/> system	Warning	system

OK Cancel

event level filter settings

2016-07-06 오후 3:06:48 Ver. 2.1.6031 User Id = root Level = Administrator

Event Management (Monitoring)

The screenshot displays the Smart Recording Manager interface. The main window shows a table of recording sessions with the following data:

No.	Call ID	Source IP	Rec StartTime	Initiated Time	Established Time	Call Duration	Calling
1	3	172.16.9.29	2016-07-06 15:13:06	2016-07-07 00:07:38	2016-07-07 00:07:38	00:02:59	1000

Annotations with red arrows point to the following elements:

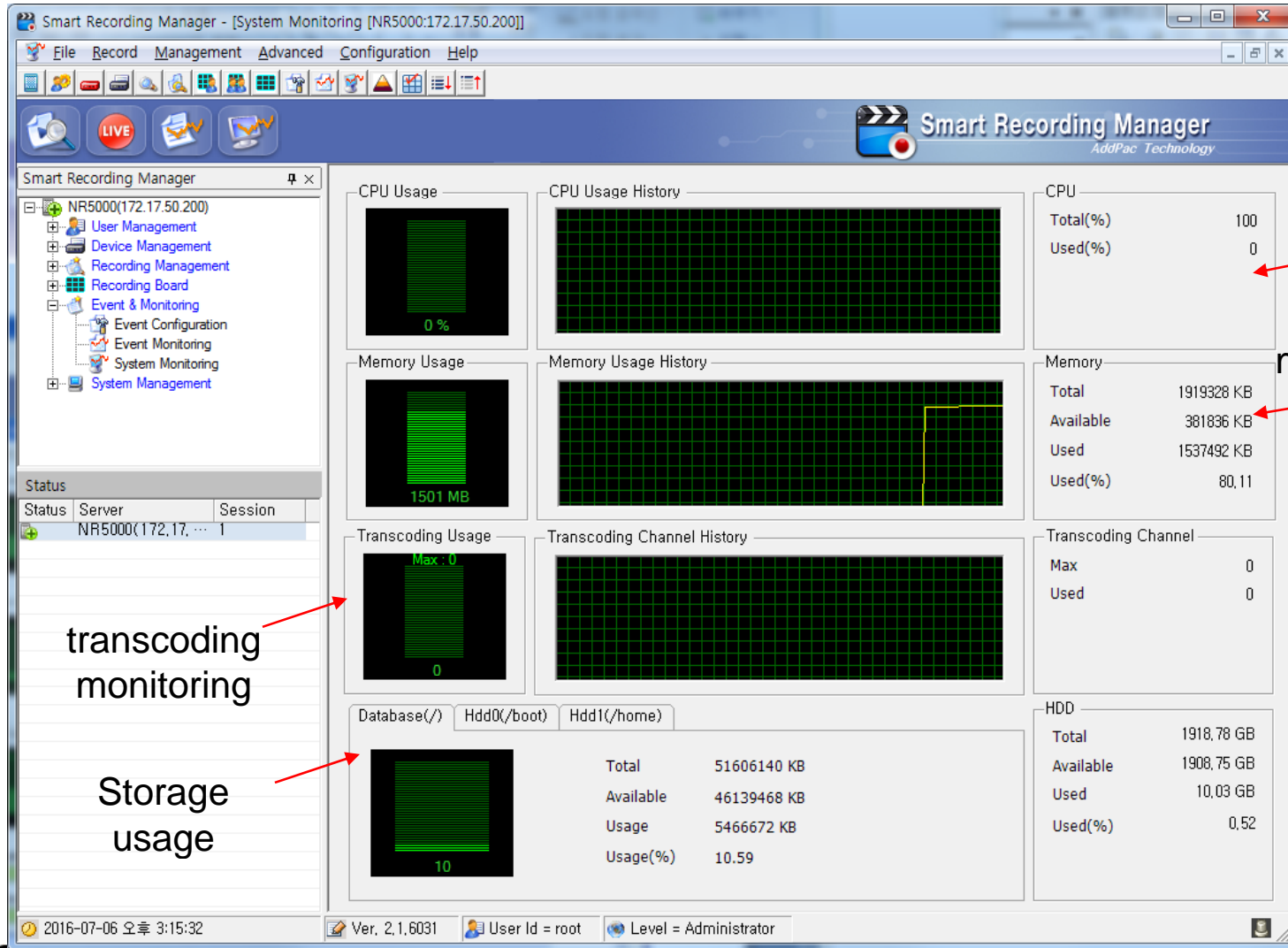
- Event monitoring**: Points to the 'Event Monitoring' option in the left-hand navigation tree.
- Event filter**: Points to the 'Event filter' button in the top right of the main window.
- Pause event**: Points to the 'Pause' button in the bottom right of the main window.

At the bottom of the interface, there is an 'Event Monitoring' log window with the following data:

DateTime	Host	Severity	Module	Description
Jul 06 06:13:06	172.17.50.200	Informational	recording	Start Recording, bind id:-10000
Jul 06 06:15:31	172.17.50.200	Debug	system	get current recording session :
Jul 06 06:15:33	172.17.50.200	Debug	system	get current recording session :
Jul 06 06:15:43	172.17.50.200	Debug	system	get current recording session :
Jul 06 06:15:55	172.17.50.200	Debug	system	get current recording session :
Jul 06 06:16:05	172.17.50.200	Debug	system	get current recording session :

The bottom status bar shows: 2016-07-06 오후 3:12:38, Ver. 2.1,6031, User Id = root, Level = Administrator.

Event Management (System Monitoring)



cpu usage (%)

memory usage

transcoding monitoring

Storage usage

Recording Board

(User)

The screenshot displays the 'Smart Recording Manager' application window. The title bar reads 'Smart Recording Manager - [Users [NR5000:172.17.50.200]]'. The menu bar includes 'File', 'Record', 'Management', 'Advanced', 'Configuration', and 'Help'. The interface features a sidebar with a tree view containing 'NR5000(172.17.50.200)' and sub-items like 'User Management', 'Device Management', 'Recording Management', 'Record Search', 'Record Session', 'Recording Board', 'Users', 'Groups', 'Map List', 'Event & Monitoring', and 'System Management'. The 'Recording Board' section is active, showing a table of users. The table has columns for 'No.', 'User ID', 'Name', 'Phone Number', 'Description', and 'Group'. The data rows are as follows:

No.	User ID	Name	Phone Number	Description	Group
1	bgchoi	Choi Byung Koo	1024		Signaling
2	jhkwon	Kwon	3000		NMS
3	jschoi	Choi Jin suk	1007		NMS
4	ohs	Oh hyung suk	1000		Signaling
5	sklee	Lee sang kyun	1009		Signaling

Below the table is a 'Status' section with a table:

Status	Server	Session
+	NR5000(172.17. ...	1

The bottom status bar shows the date and time '2016-07-06 오후 3:25:38', version 'Ver. 2.1.6031', user 'User Id = root', and level 'Level = Administrator'.

Recording Board

(Group)

The screenshot displays the Smart Recording Manager application window. The main interface shows a tree view on the left with 'Recording Board' selected. The central area contains a table with the following data:

No.	Name	Description
1	NMS	
2	Signaling	

A 'Group Properties' dialog box is open, showing the following fields and tables:

Group Name:

Description:

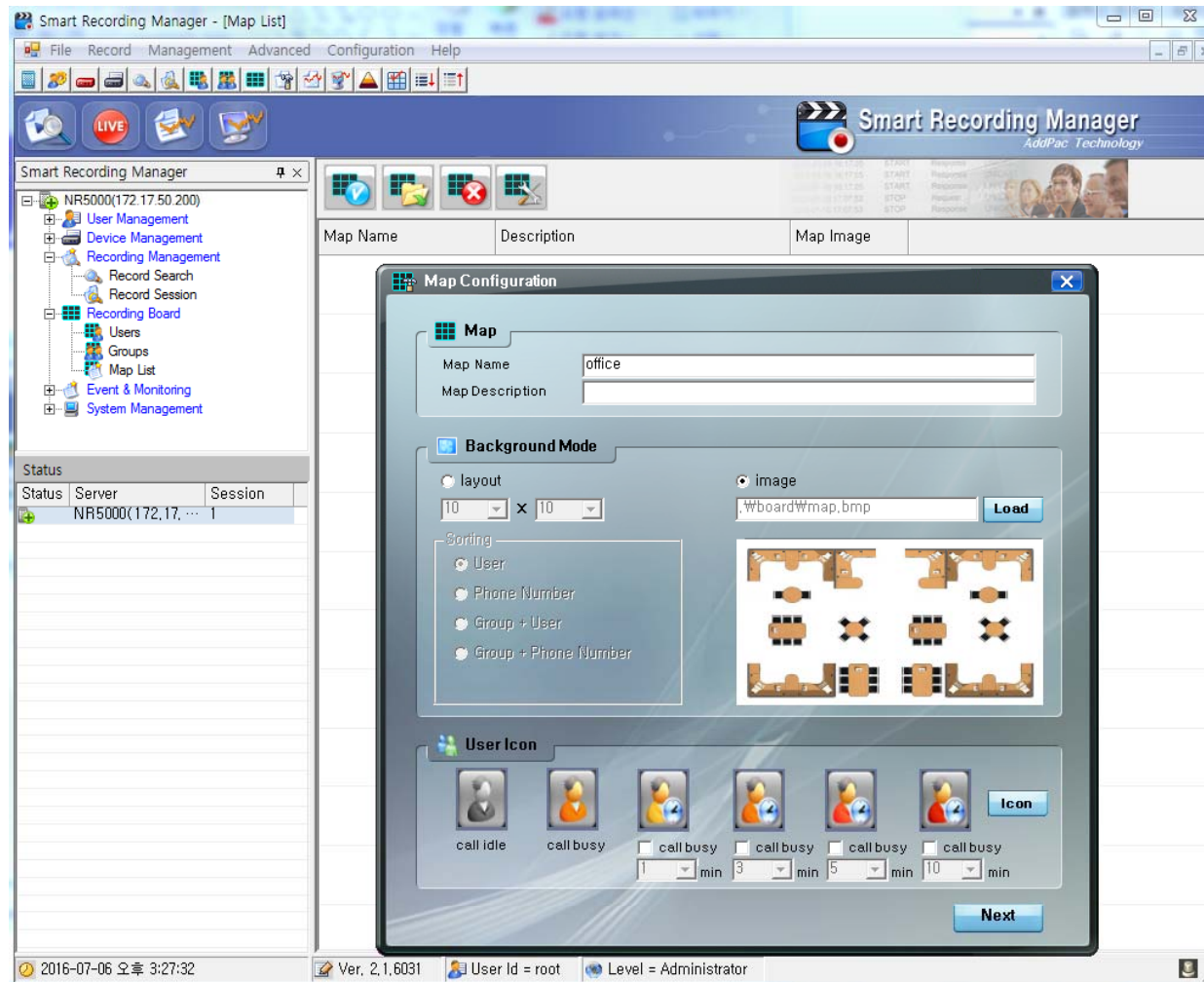
User:

Users			Users in Group		
User ID	Name	Phone Number	User ID	Name	Phone Number
			bgchoi	Choi Byu...	1024
			ohs	Oh hyung...	1000
			sklee	Lee sang...	1009

Buttons: OK, Cancel

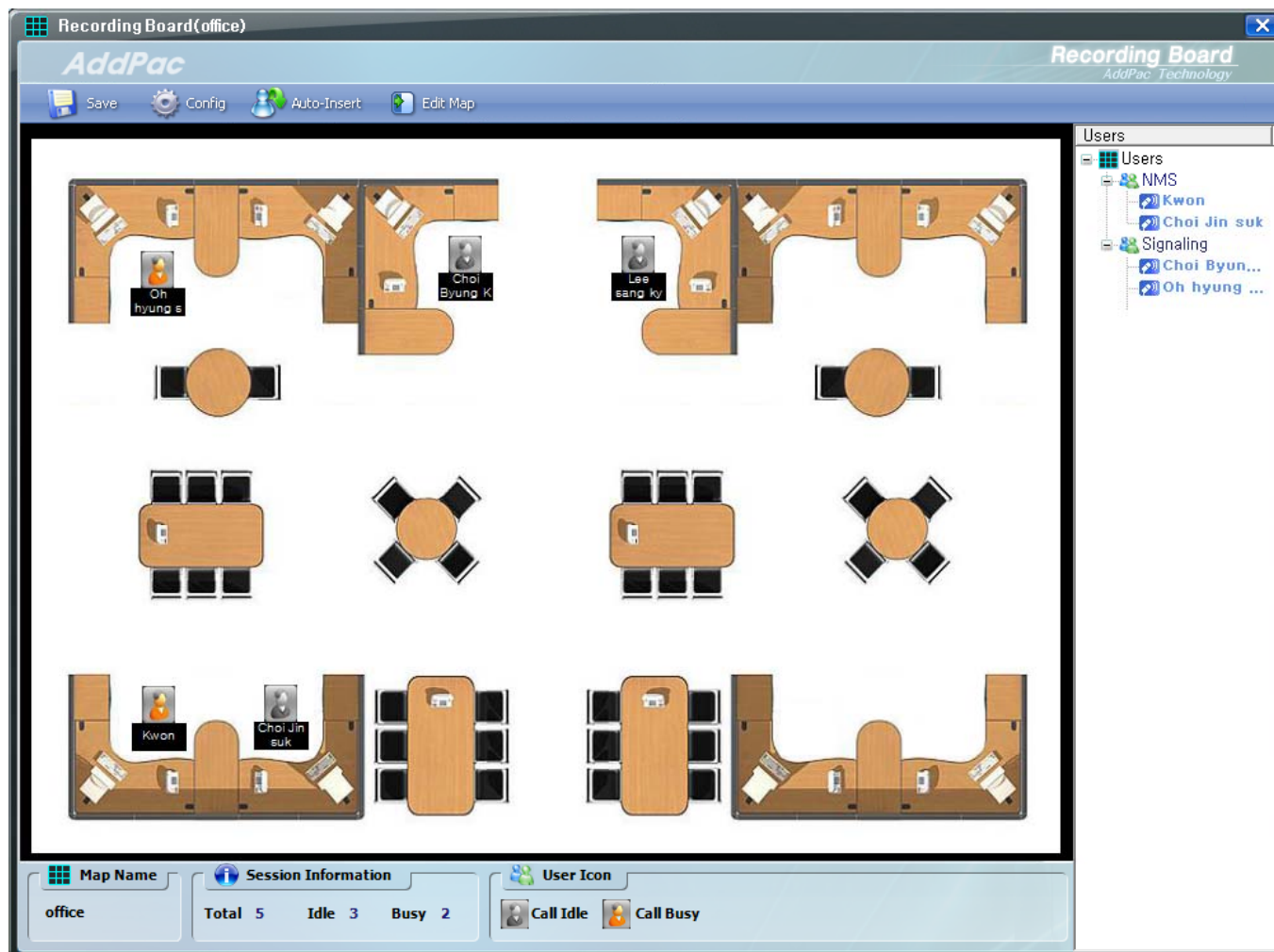
System tray information: 2016-07-06 오후 3:26:00, Ver. 2.1.6031, User Id = root, Level = Administrator

Recording Board (Map)



Recording Board

(Map Editing and user monitoring)



Smart Recording File Manager

(Recorded Call List Search)

Smart Recording File Manager

File Management Help

AddPac Smart Recording File Manager AddPac Technology

Search Target: Local Database Start: 2016년 1월 1일 금요일 End: 2016년 7월 6일 수요일 Search Advanced (Total: 0) (Page 0/0)

Remote Database (172.17.50.200)

- 2016
 - 06
 - 07
 - 2016-07-01
 - 2016-07-04
 - 2016-07-05
 - 17-06

Server Recording History (Year/Month/Day)

Start Time	End Time	Duration	Calling Number	Calling User	Called Number	Called User	Recording Source
2016-07-05 10:30:...	2016-07-05 10:30:16	00:00:00	1000		3000		172.16.9.29 ...
2016-07-05 12:47:...	2016-07-05 12:47:45	00:00:00	1000		3000		172.16.9.29 ...
2016-07-05 12:50:...	2016-07-05 12:50:28	00:00:00	1000		3001		172.16.9.29 ...
2016-07-05 12:50:...	2016-07-05 12:50:40	00:00:00	1000		3001		172.16.9.29 ...
2016-07-05 12:51:...	2016-07-05 12:51:05	00:00:00	1000		3001		172.16.9.29 ...
2016-07-05 12:51:...	2016-07-05 12:51:09	00:00:00	1000		3000		172.16.9.29 ...
2016-07-05 12:53:...	2016-07-05 12:53:09	00:00:00	1000		3001		172.16.9.29 ...
2016-07-05 14:10:...	2016-07-05 14:10:01	00:00:00	1000		3001		172.16.9.29 ...
2016-07-05 14:11:...	2016-07-05 14:11:27	00:00:00	1000		3001		172.16.9.29 ...
2016-07-05 14:12:...	2016-07-05 14:12:42	00:00:00	1000		3001		172.16.9.29 ...
2016-07-05 14:13:...	2016-07-05 14:13:03	00:00:00	1000		3001		172.16.9.29 ...

Searched Recording History

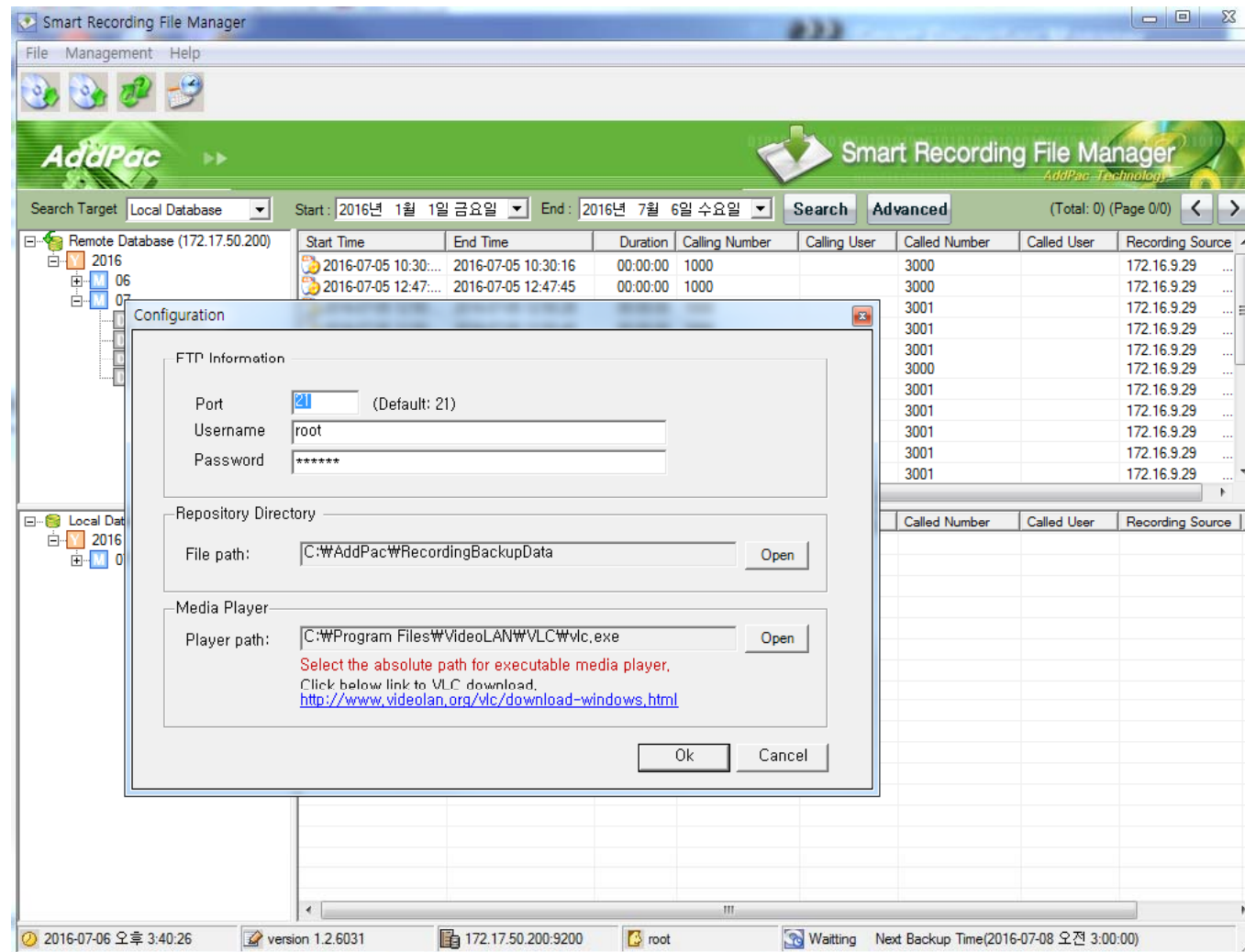
Local Database

- 2016
 - 07

Backup PC Recording History (Year/Month/Day)

2016-07-06 오후 3:39:29 version 1.2.6031 172.17.50.200:9200 root Waiting Next Backup Time(2016-07-08 오전 3:00:00)

Smart Recording File Manager (Configuration)



Smart Recording File Manager

(Call List Properties)

The screenshot displays the Smart Recording File Manager interface. The main window shows a list of recording sessions with columns for Start Time, End Time, Duration, Calling Number, Calling User, Called Number, Called User, and Recording Source. A context menu is open over a selected row, showing options like Download, Delete, Refresh, and Properties. A dialog box titled 'Recording Session Information' is also visible, showing details for two specific recording sessions.

Start Time	End Time	Duration	Calling Number	Calling User	Called Number	Called User	Recording Source
2016-07-05 10:30:...	2016-07-05 10:30:16	00:00:00	1000		3000		172.16.9.29 ...
2016-07-05 12:47:...	2016-07-05 12:47:45	00:00:00	1000		3000		172.16.9.29 ...
2016-07-05 12:50:...	2016-07-05 12:50:28	00:00:00	1000		3001		172.16.9.29 ...
2016-07-05		00:00:00	1000		3001		172.16.9.29 ...
2016-07-05		00:00:00	1000		3001		172.16.9.29 ...
2016-07-05		00:00:00	1000		3000		172.16.9.29 ...
2016-07-05		00:00:00	1000		3001		172.16.9.29 ...
2016-07-05		00:00:00	1000		3001		172.16.9.29 ...
2016-07-05		00:00:00	1000		3001		172.16.9.29 ...
2016-07-05 14:12:...	2016-07-05 14:12:42	00:00:00	1000		3001		172.16.9.29 ...
2016-07-05 14:13:...							

Filename	Start Time	End Time	Duration	Size	Audio Codec	Transcoding Codec
40003020160706005117...	2016-07-06 09:51:17	2016-07-06 09:51:31	00:00:14	1,763 KB	G711U	G711U
0003020160706005117...	2016-07-06 09:51:17	2016-07-06 09:51:31	00:00:14	1,763 KB	G711U	G711U

Smart Recording File Manager

(Server to Local Backup)

The screenshot displays the 'Smart Recording File Manager' application window. A 'Download' dialog box is open, showing a list of 16 files to be downloaded from a remote database to a local backup directory. The dialog includes a table with columns for File Name, Duration, Size, DateTime, and Status. Below the table, it shows the download directory path, progress statistics (Received Size: 0/0 Bytes, Total Size: 31,875,502 Bytes, Progress Time: 00:00:00), and a checkbox for 'Delete files after download'. The main application window shows a tree view of the 'Remote Database' and 'Local Database' with folders for years and months.

File Name	Duration	Size	DateTime	Status
/home/callrecfiles/20160706/0/00...	00:00:13	1,492 KB	2016-07-06 09:2...	Wait
/home/callrecfiles/20160706/0/00...	00:00:13	1,492 KB	2016-07-06 09:2...	Wait
/home/callrecfiles/20160706/0/00...	00:02:13	14,519 KB	2016-07-06 09:2...	Wait
/home/callrecfiles/20160706/0/00...	00:02:13	14,519 KB	2016-07-06 09:2...	Wait
/home/callrecfiles/20160706/0/00...	00:00:00	0 KB	2016-07-06 09:4...	Wait
/home/callrecfiles/20160706/0/00...	00:00:00	0 KB	2016-07-06 09:4...	Wait
/home/callrecfiles/20160706/0/00...	00:00:46	5,750 KB	2016-07-06 09:4...	Wait
/home/callrecfiles/20160706/0/00...	00:00:46	5,750 KB	2016-07-06 09:4...	Wait
/home/callrecfiles/20160706/0/00...	00:00:43	4,916 KB	2016-07-06 09:4...	Wait
/home/callrecfiles/20160706/0/00...	00:00:43	4,916 KB	2016-07-06 09:4...	Wait
/home/callrecfiles/20160706/0/00...	00:00:14	1,763 KB	2016-07-06 09:5...	Wait
/home/callrecfiles/20160706/0/00...	00:00:14	1,763 KB	2016-07-06 09:5...	Wait
/home/callrecfiles/20160706/1/00...	00:00:14	2,018 KB	2016-07-06 10:4...	Wait

Smart Recording File Manager

(Recorded Call List Search)

The screenshot displays the Smart Recording File Manager interface. A search filter dialog box is open, allowing users to refine their search criteria. The dialog includes fields for 'Record Time' (Start and End) and a 'Filter' section with columns for 'Filter Name', 'Rule', and 'Search'. The 'Search' column contains the value '5067'. Below the filter section, there is a checkbox for 'Recording Service Unavailable Files (not G711U codec)' and a note: '* It may take a long time.' The background shows a table of recorded calls with columns for Start Time, End Time, Duration, Calling Number, Calling User, Called Number, Called User, and Recording Source.

Start Time	End Time	Duration	Calling Number	Calling User	Called Number	Called User	Recording Source
2016-07-06 12:04:33	2016-07-06 12:04:34	00:00:09	5055		5155		172.17.50.26
2016-07-06 12:04:34	2016-07-06 12:04:35	00:00:09	5067		5167		172.17.50.26
2016-07-06 12:04:35	2016-07-06 12:04:38	00:00:09	5085		5185		172.17.50.26
2016-07-06 12:04:36	2016-07-06 12:04:42	00:00:09	5098		5198		172.17.50.26

Smart Recording File Manager

(Periodical Backup)

The screenshot displays the Smart Recording File Manager application. The main window shows a search results table with columns: Start Time, End Time, Duration, Calling Number, Calling User, Called Number, Called User, and Recording Source. The results show two entries for 2016-07-06.

Start Time	End Time	Duration	Calling Number	Calling User	Called Number	Called User	Recording Source
2016-07-06 12:04:34	2016-07-06 12:04:34	00:00:09	5055		5155		172.17.50.26
2016-07-06 12:04:35	2016-07-06 12:04:35	00:00:09	5067		5167		172.17.50.26

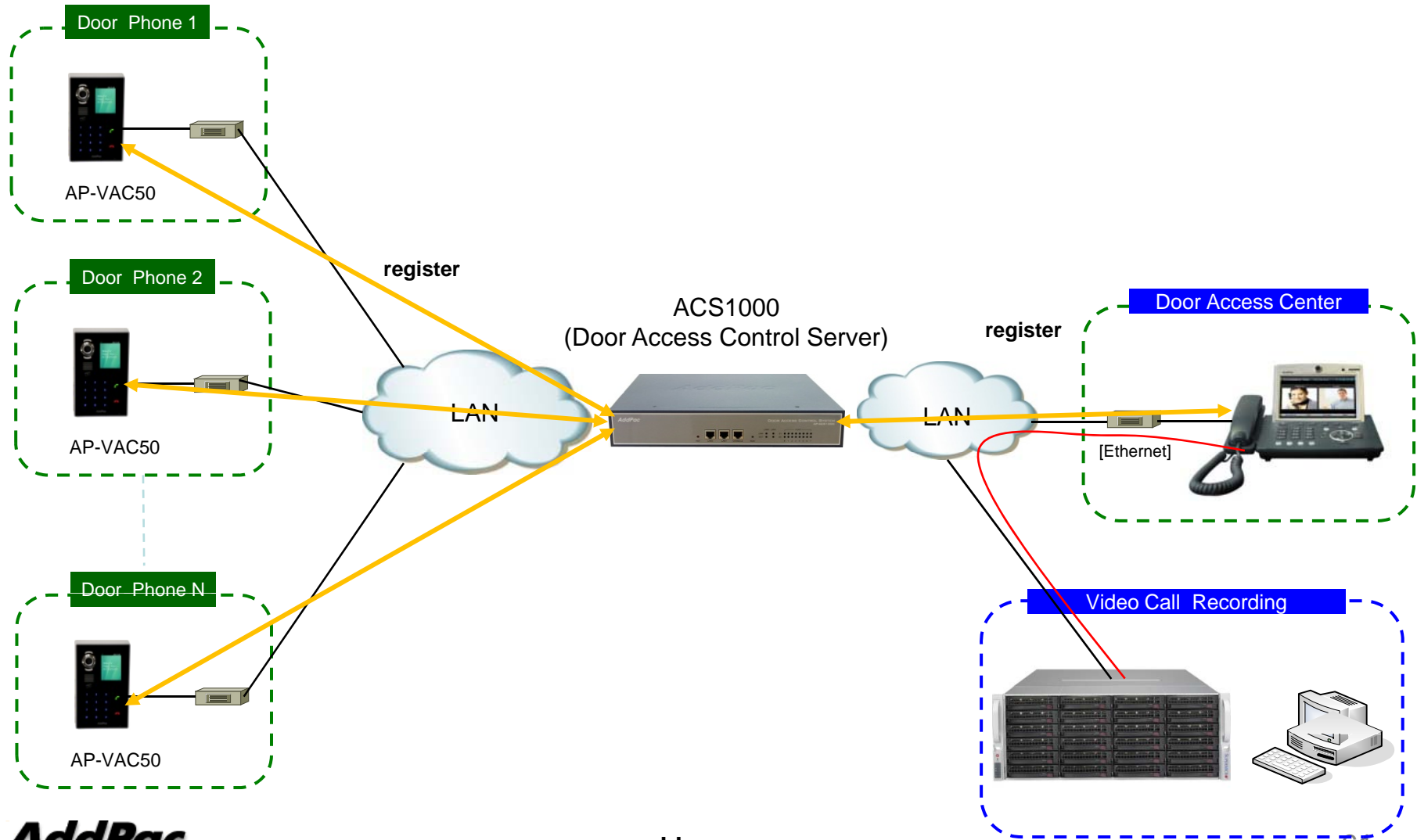
A 'Schedule Setting' dialog box is open, showing configuration options for a recording source. The 'Recording Source' list includes 172.17.207.207, 172.17.50.26, and 172.17.50.80. The 'Scheduler Run / Stop' section is checked, with 'Daily' selected and 'Every 1 Days' set. The 'Start Time' is 03:00:00. There are checkboxes for 'Delete files after download' and 'Download to file overwrite', both of which are unchecked. The 'Directory' field is set to 'C:\AddPac\RecordingBackupData'.

Application Service

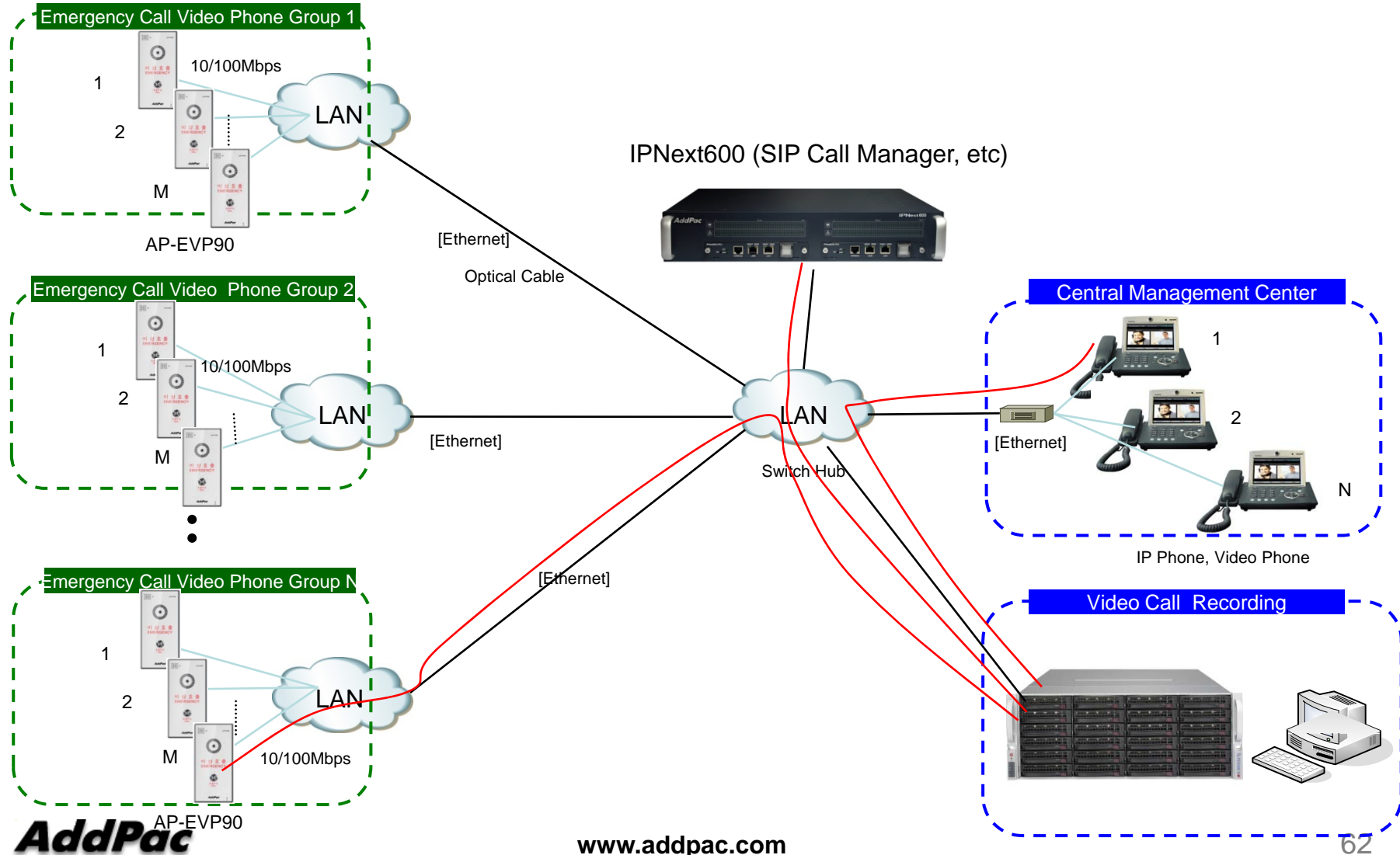
AP-NR10000 IP Video Recording Server

- IP Video Door Phone Application
- IP Video Telephony Application
- Video Conference Application
- Emergency Call Video Phone Application

IP Video Door Phone Application



Emergency Video Call Center Application





Thank you!

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