HD Video Conference Solution
for Police-District Court

Preliminary Product Overview

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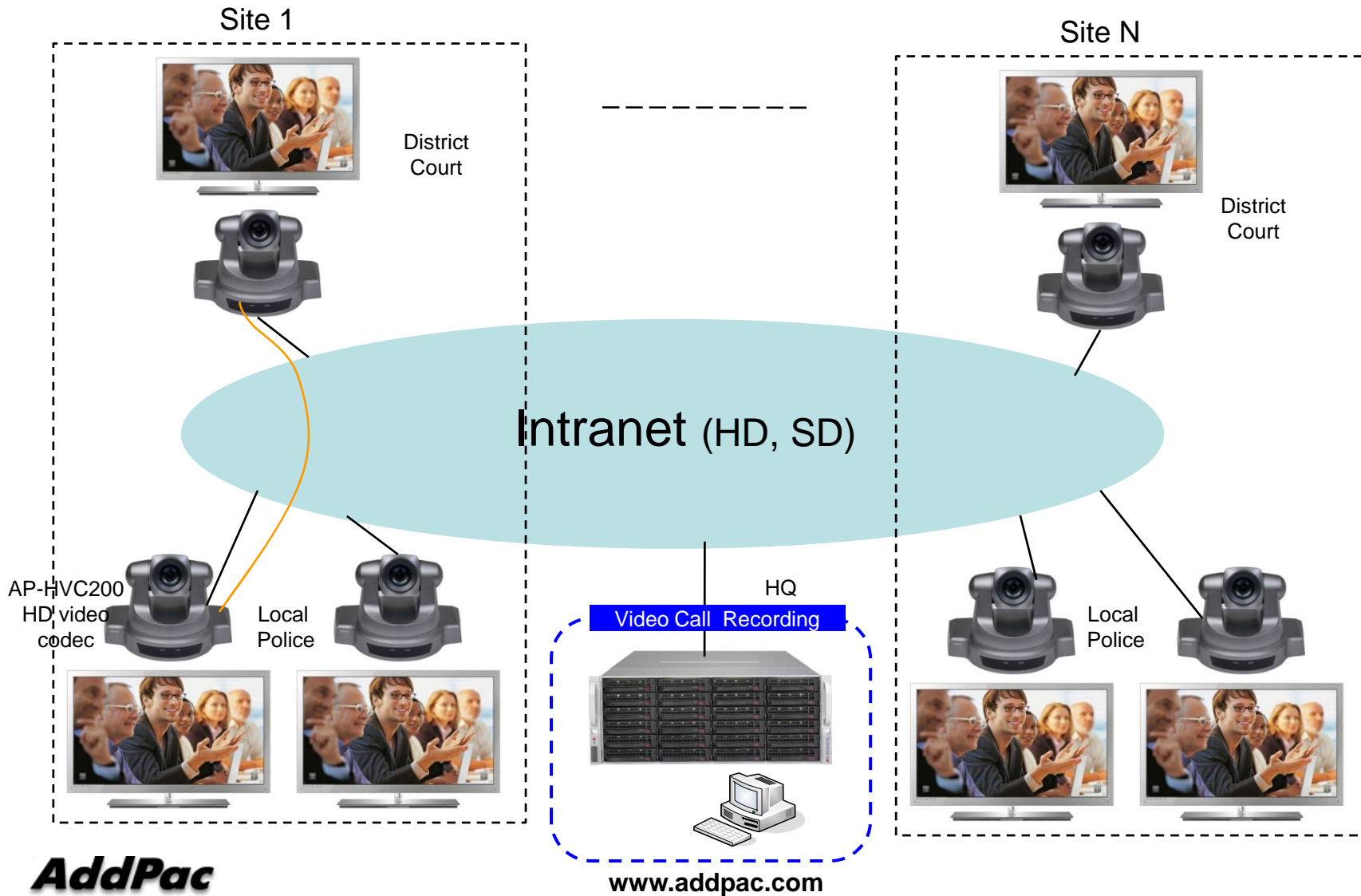
AddPac Technology

2011, Sales and Marketing

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Contents

- 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

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HD/SD Video Conference Network Diagram

Site 1

District Court

District Court

Site N

Intranet (HD, SD)

AP-HVC200 HD video codec

Local Police

HQ

Video Call Recording

Local Police

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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

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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

High Definition Video Conferencing & V²oIP Telephony

HD A/V Broadcasting, etc Various Application Service

High-quality Image HD 720P, 30fps Up to 8Mbps

Excellent Voice Quality G.722/G.711/G.726,etc

High Performance RISC CPU & Programmable DSP

Full HDTV Display Interface, Various I/O Interface

State-of-art Signaling H.323, SIP Dual Stack

APOS™Technology Multimedia Network Protocol

Video Conference Controller Interworking (IP Phone)

IP based Network Protocol & Video/Voice Traffic QoS

Broadband IP Networking with one(1) 10/100/Mbps Fast Ethernet

High-end Video Codec H.264 , MPEG4

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Multimedia Service

AP-HVC200 HD Video Conference Equipment

Multimedia Conferencing, and more… Our Customer Application

Video   **Audio**   **Voice**   **Data**

EMS   **OSD**

APOS Internetworking Technology

AddPac Video Conference Hardware Platform

Broadband IP Networking
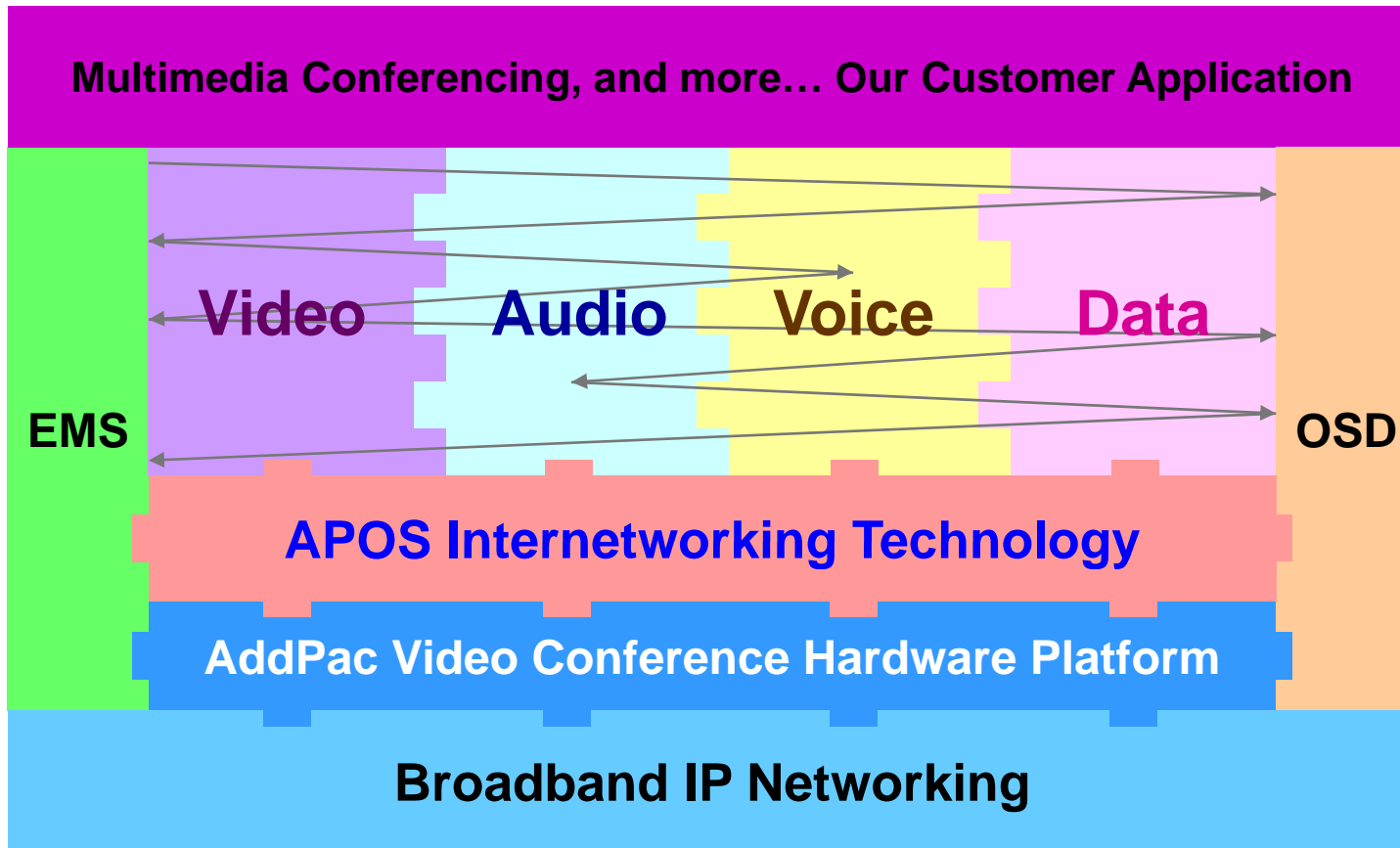
• APOS : AddPac Internetworking Operating System
• OSD : On- Screen Display
• EMS : Element Management System

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Benefits and Features

- 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

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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

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Hardware Specification

AP-HVC200 HD Video Conference Equipment

- 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

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Hardware Specification

AP-HVC200 HD Video Conference Equipment

High
Performance
CPU

High-end
DSP

IR Sensor & Status Indication Area

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Hardware Specification

AP-HVC200 HD Video Conference Equipment

High Performance CPU

High-end DSP

Component Video Output

HDMI Out

Fast Ethernet

USB Interface for Mouse,etc

Power Inlet & Switch

RS232C Console Port

Audio In/Output

CVBS Output

VoIP FXS Interface

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Software Service

- 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

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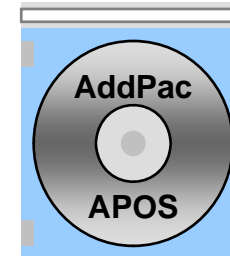
Network Service and Features

- **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

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Network Service and Features

- **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

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OSD Software Features

- 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
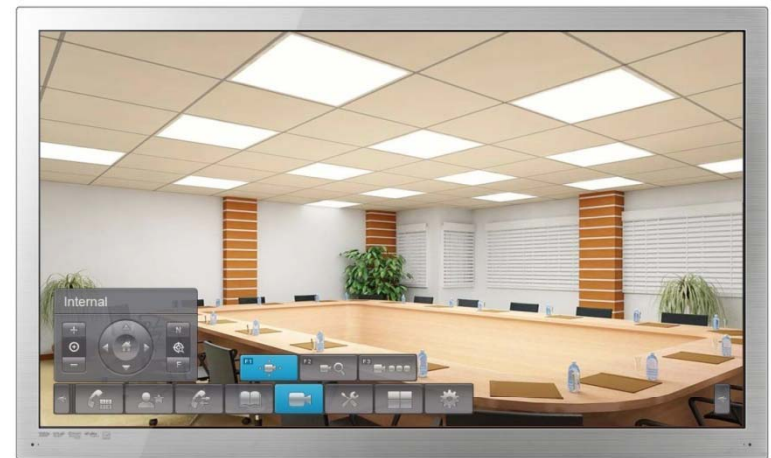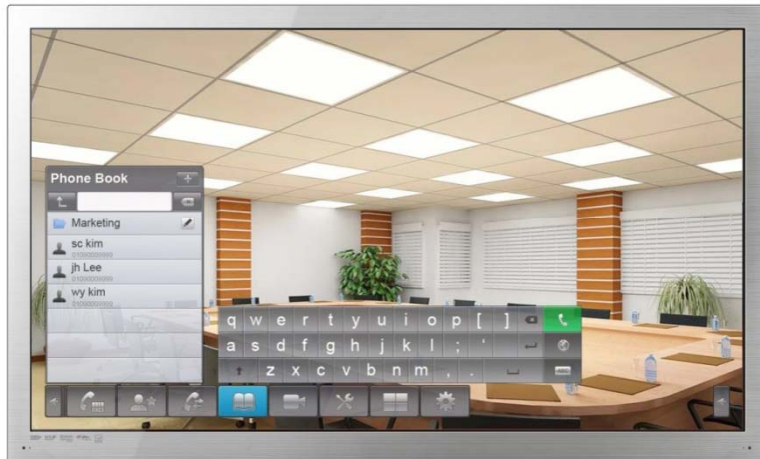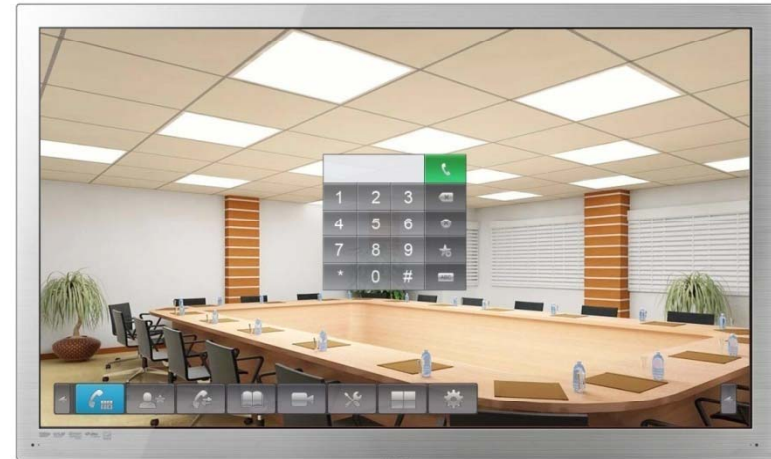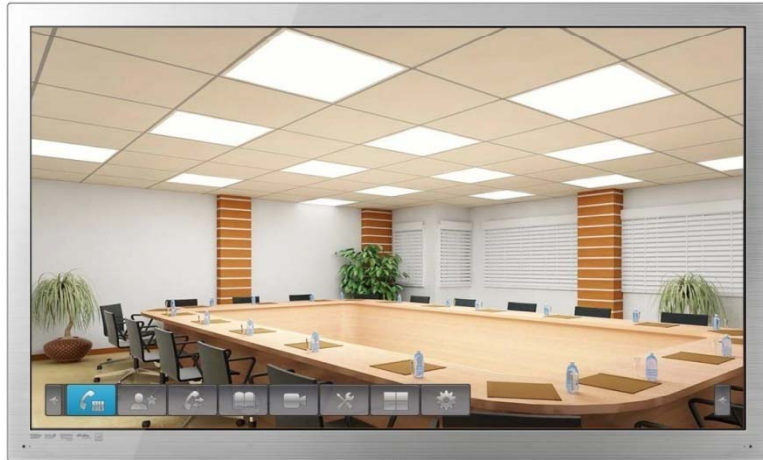
AP-HVC200 HD Video Conference Equipment

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

Point-to-Point Video Service
(symmetric video quality)

30fps, HD

IP Network

LAN · WAN

WAN · LAN

10/100/1000M [Router]

[Router] 10/100/1000M

AP-HVC200

AP-HVC200

VoIP Service
(H.323, SIP)

VoIP Service
(H.323, SIP)

30fps, HD

Multimedia Service
(Video, Audio/Voice, and more…)

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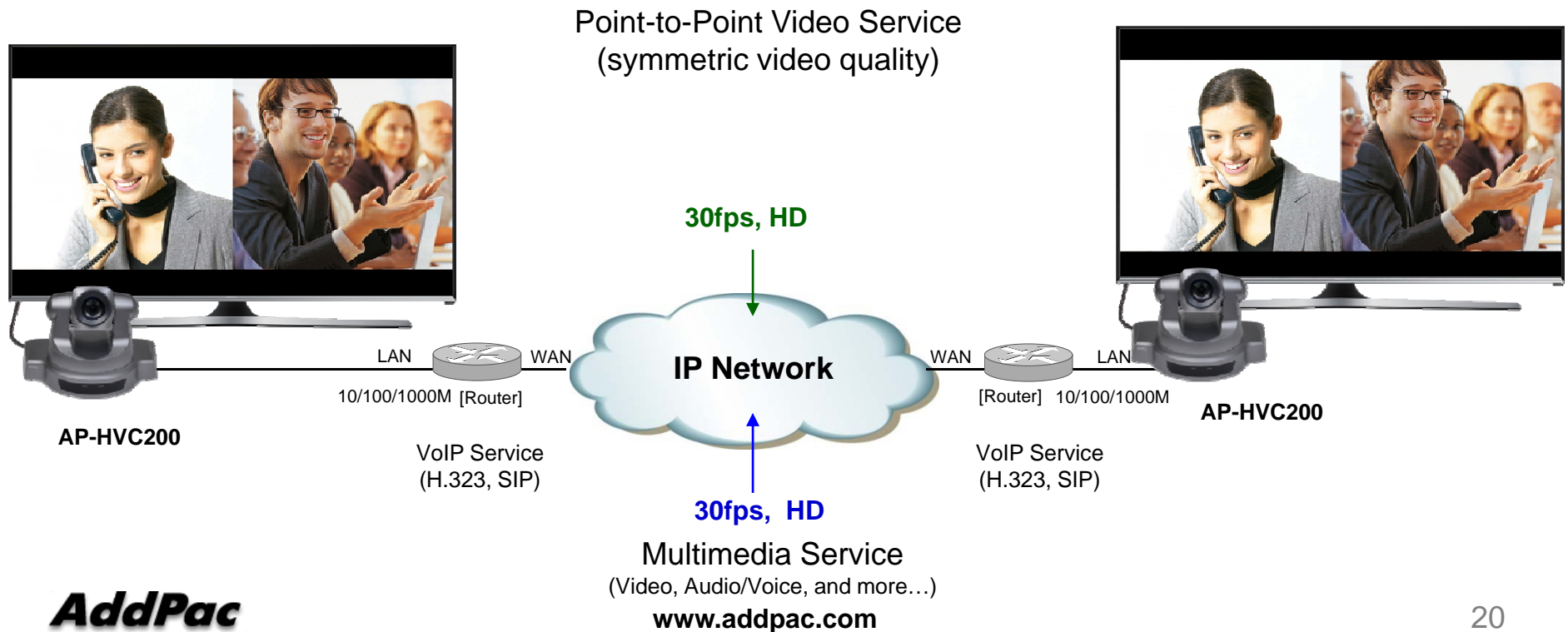
Video Conference

AP-HVC200 HD Video Conference Equipment

Multipoint Video Service
(Video, Audio/Voice, and more…)

AP-MC5000 Video MCU

WAN

IP Network

LAN
10/100M

WAN
[Router]

WAN

WAN
[Router]

LAN
10/100M

WAN
[Router]

LAN
10/100M

LAN
10/100M

WAN
[Router]

AP-HVC200
HD Video Codec

AP-HVC200
HD Video Codec

AP-HVC200
HD Video Codec

AP-HVC200
HD Video Codec

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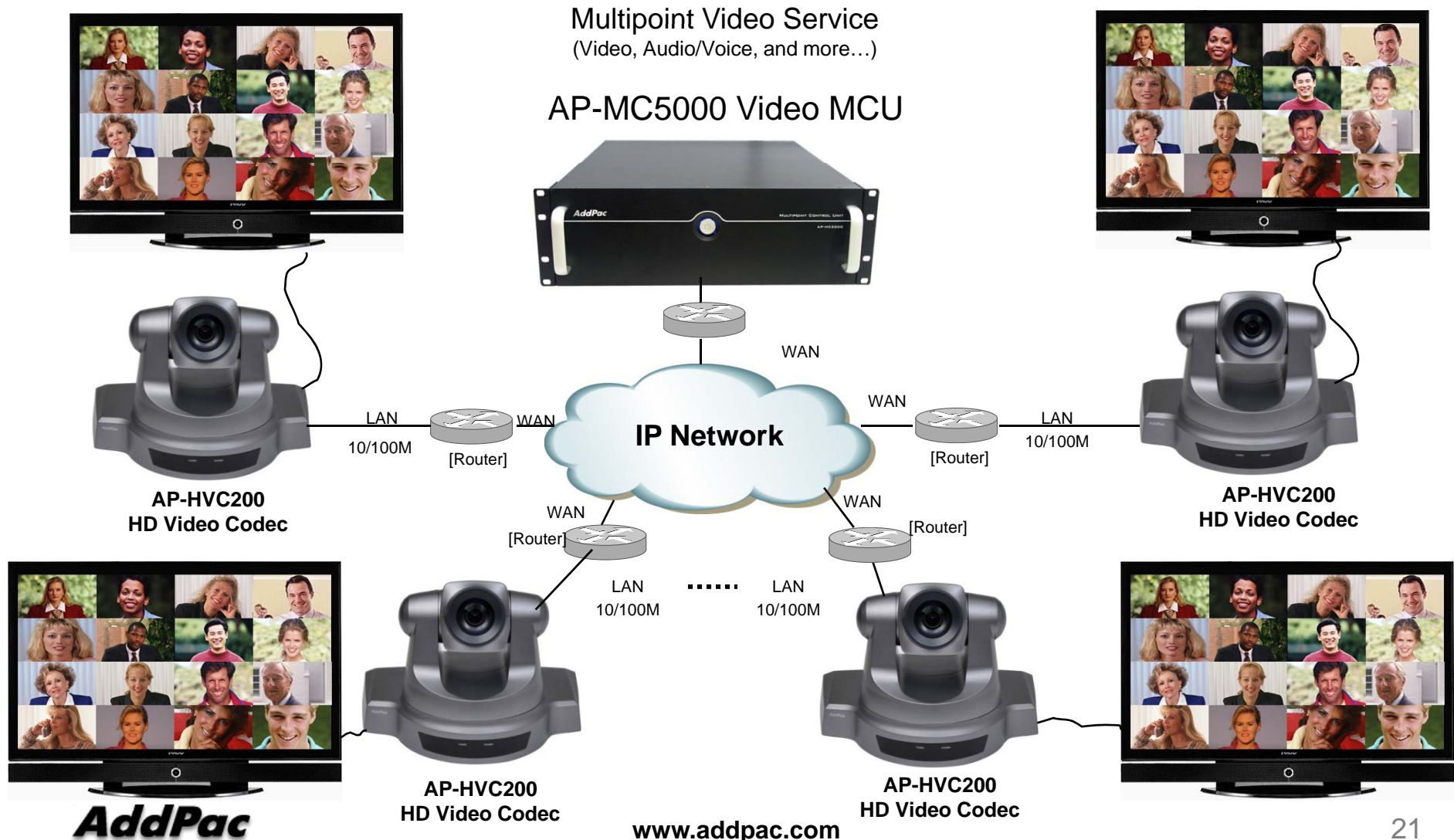
AP-MP100
Acoustic Echo Canceller Micro Phone

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

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Hardware Specification

- 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

Mute Button

Voice Activity LED
(Blink : Green Color)

Mute Status LED
(RED Color)

Power On LAMP
(RED Color)

Hardware Specification

AP-MP100 AEC Micro Phone

Audio Out & Power In
Connector

Power On/Off Switch

RS232C Port for Firmware Upgrade

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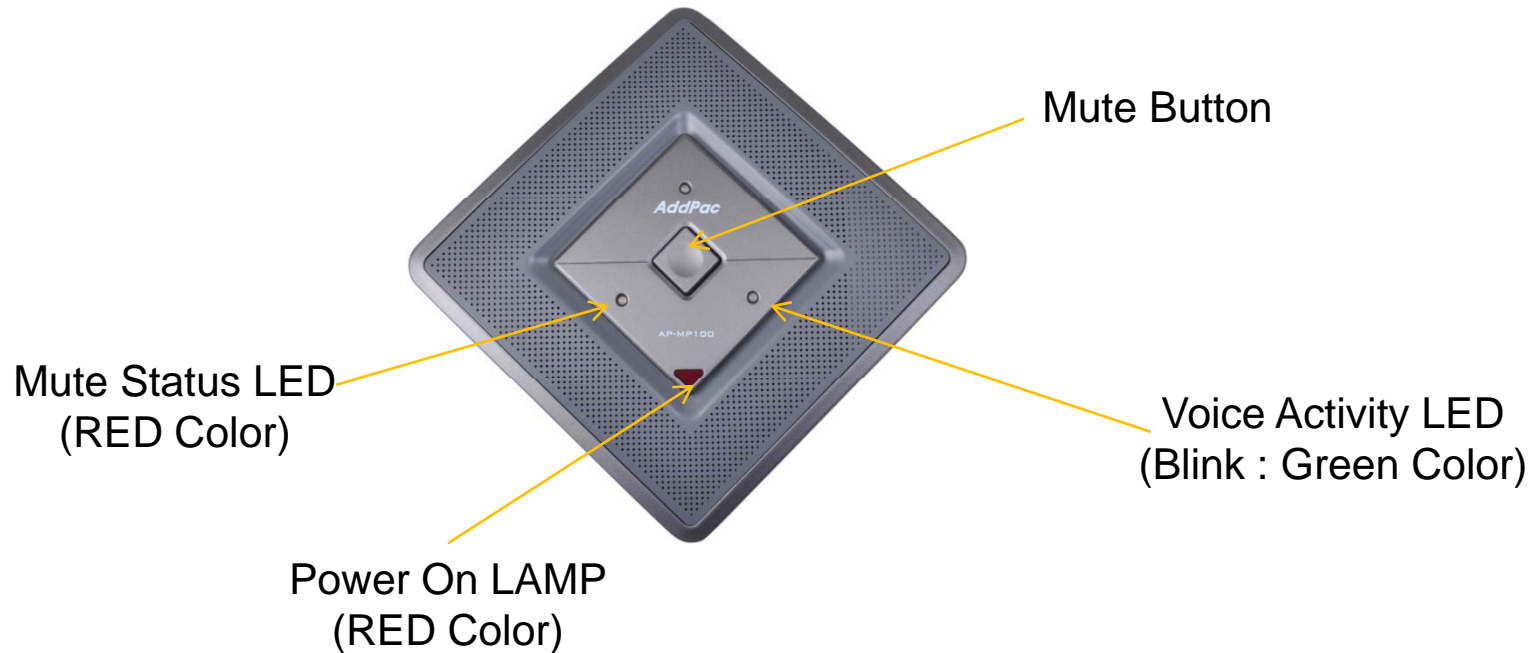
AP-MP100 AEC Micro Phone

Application Area

- Video Telephony
- Video Conference

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Video Telephony Application
AP-MP100 AEC Micro Phone

**Point-to-Point Video Service
(symmetric video quality)**

30fps, VGA

LAN

WAN

IP Network

WAN

LAN

10/100M [Router]

[Router] 10/100M

VoIP Service
(H.323, SIP)

VoIP Service
(H.323, SIP)

Analog Interface

Analog Interface

30fps, VGA

Multimedia Service
(Video, Audio/Voice, and more…)

AP-MP100

AP-MP100

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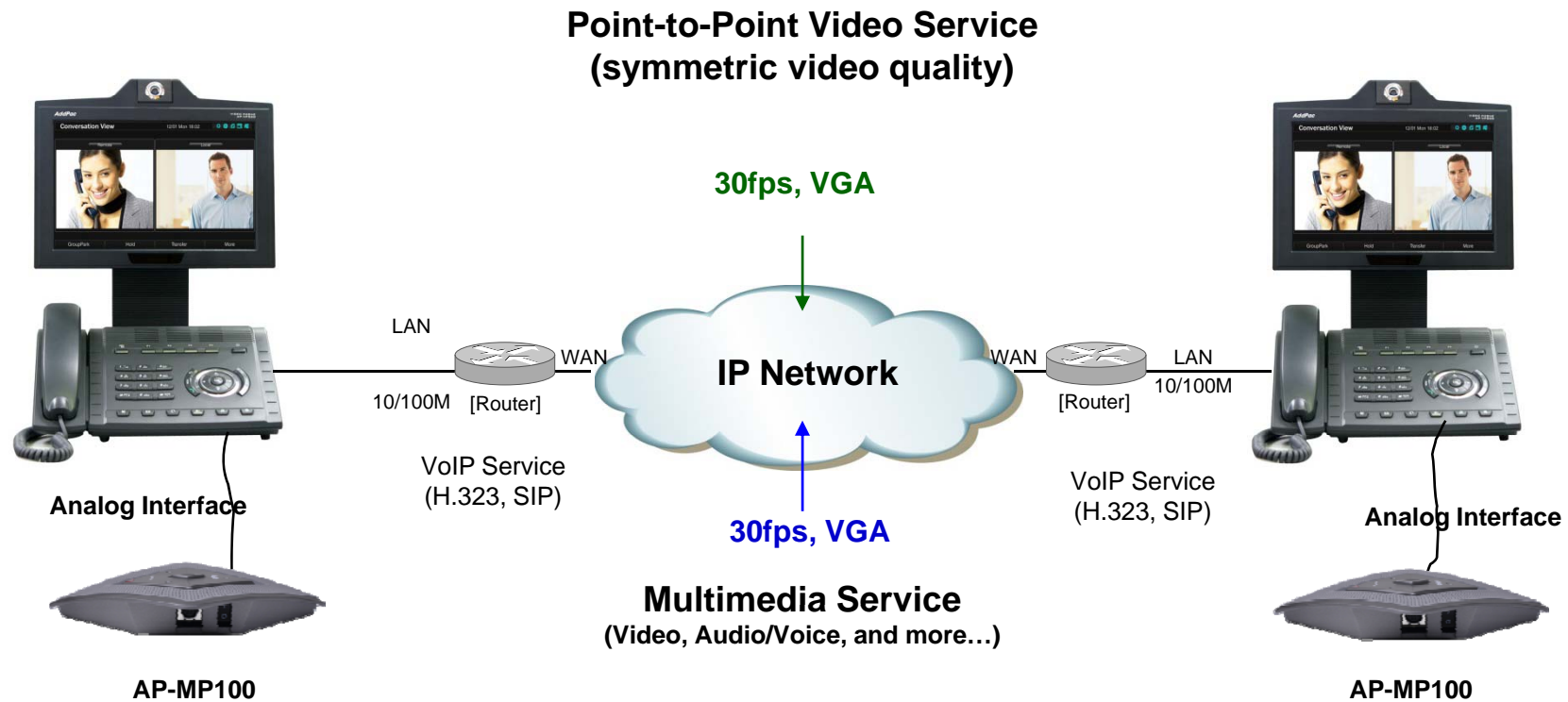
Video Conference

AP-MP100 AEC Micro Phone

H.264, 720P, 30frame

H.264, 720P, 30frame

Point-to-Point Video Service
(symmetric video quality)

HDMI

HDMI

30fps, HD

IP Network

LAN [Router] WAN

WAN [Router] LAN

10/100/1000M

10/100/1000M

AP-HVC500

AP-HVC500

VoIP Service
(H.323, SIP)

VoIP Service
(H.323, SIP)

AP-MP100

AP-MP100

30fps, HD

Multimedia Service
(Video, Audio/Voice, and more…)
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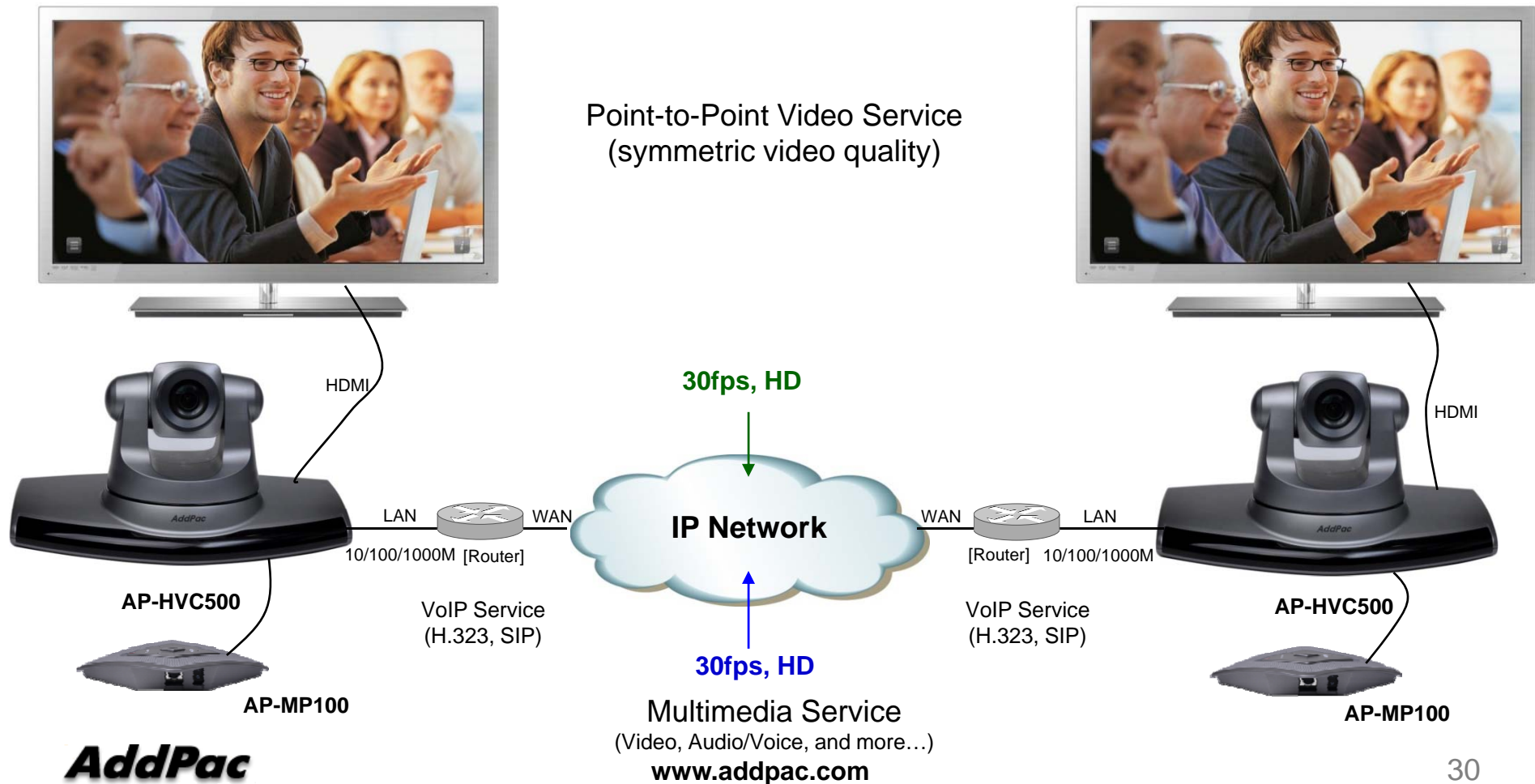
AP-NR10000
IP Video Recording Server

Contents

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

Product Overview

- 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
- Hardisk Raid Support (LSISAS RAID 0,1,5,6,10,50,60)
- Dual Power Supply
- SATA2/SATA3 Harddisk Support

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Product Highlights

AP-NR10000 IP Video Recording Server

**Next Generation IP based
Network Video Recording Server**

Linux Operating System for Stability

**High Performance IP Video
Recording Solution**

**Up to 24 Hard Disk Bay
(3.5 Inch SATA Hard Disk)**

**Smart Recording Manager for
Management**

**Firmware Upgradeable
Architecture**

**AddPac Video Terminal
Interworking
(Video Codec, Video
Phone, etc)**

**APOS™ Technology
Multimedia Network Protocol**

**Dual 10/100/1000Mbps
Gigabit Ethernet**

Dual Power Supply Support

**USB Interface Ports for
Future Extension**

Harddisk RAID Configuration

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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)

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Hardware Specification

AP-NR10000 Front Side

Power On/Off Switch

Harddisk bay

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Hardware Specification

AP-NR10000 IP Video Recording Server

AP-NR10000 Back Side

Power Input

Power Input

Cooling FAN

USB Interface for
Mouse, Storage, etc

Gigabit Ethernet
Interface

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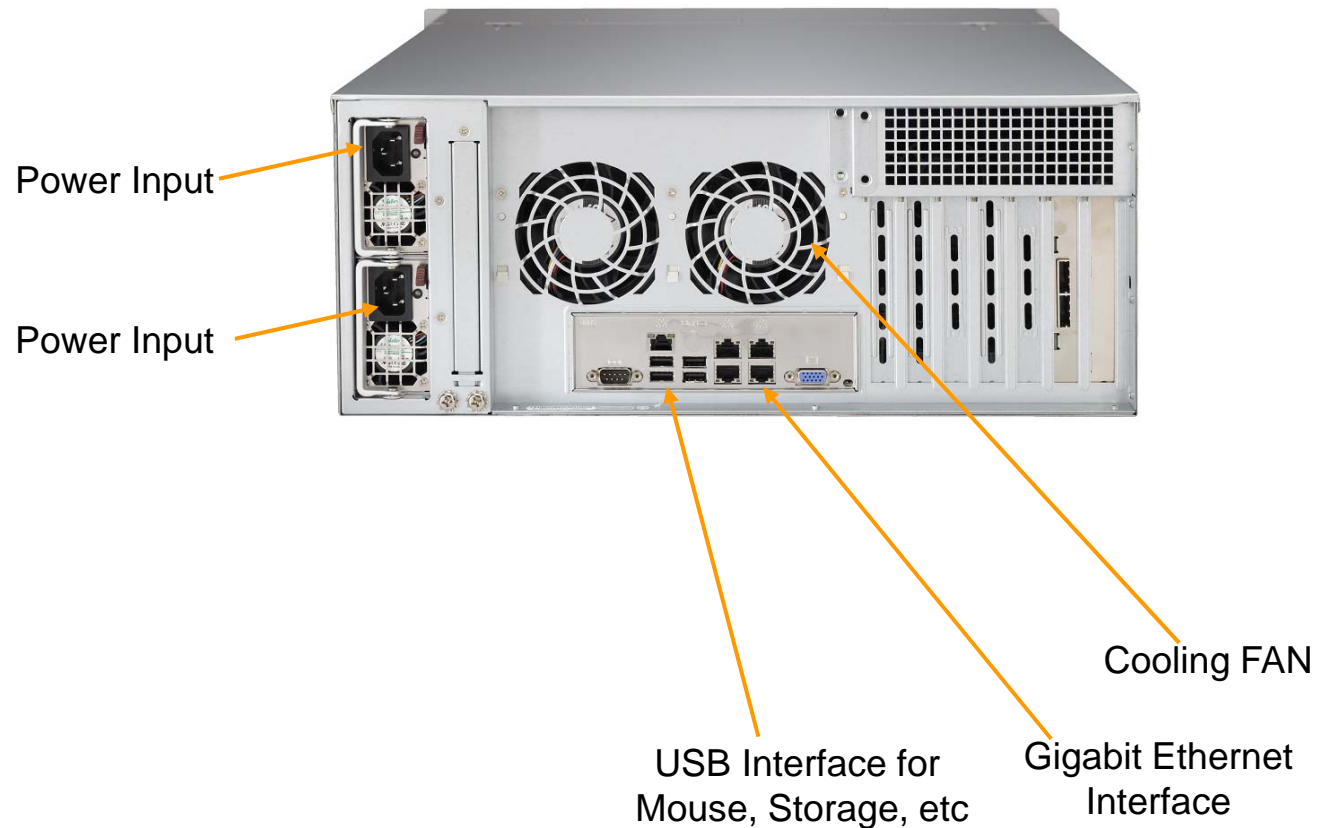
Software Service

- **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

AddPac
APOS

AddPac
Smart DVR Manager
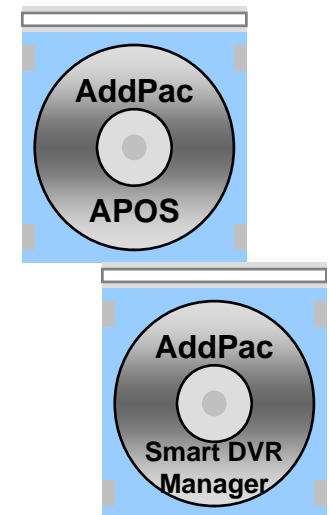
Smart Recording Manager Program

- 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

New Manager
Registration

Manager
Information
Modification

Manager
Delete

Recording Server Management

*Recording Server Management

*Server Status Information
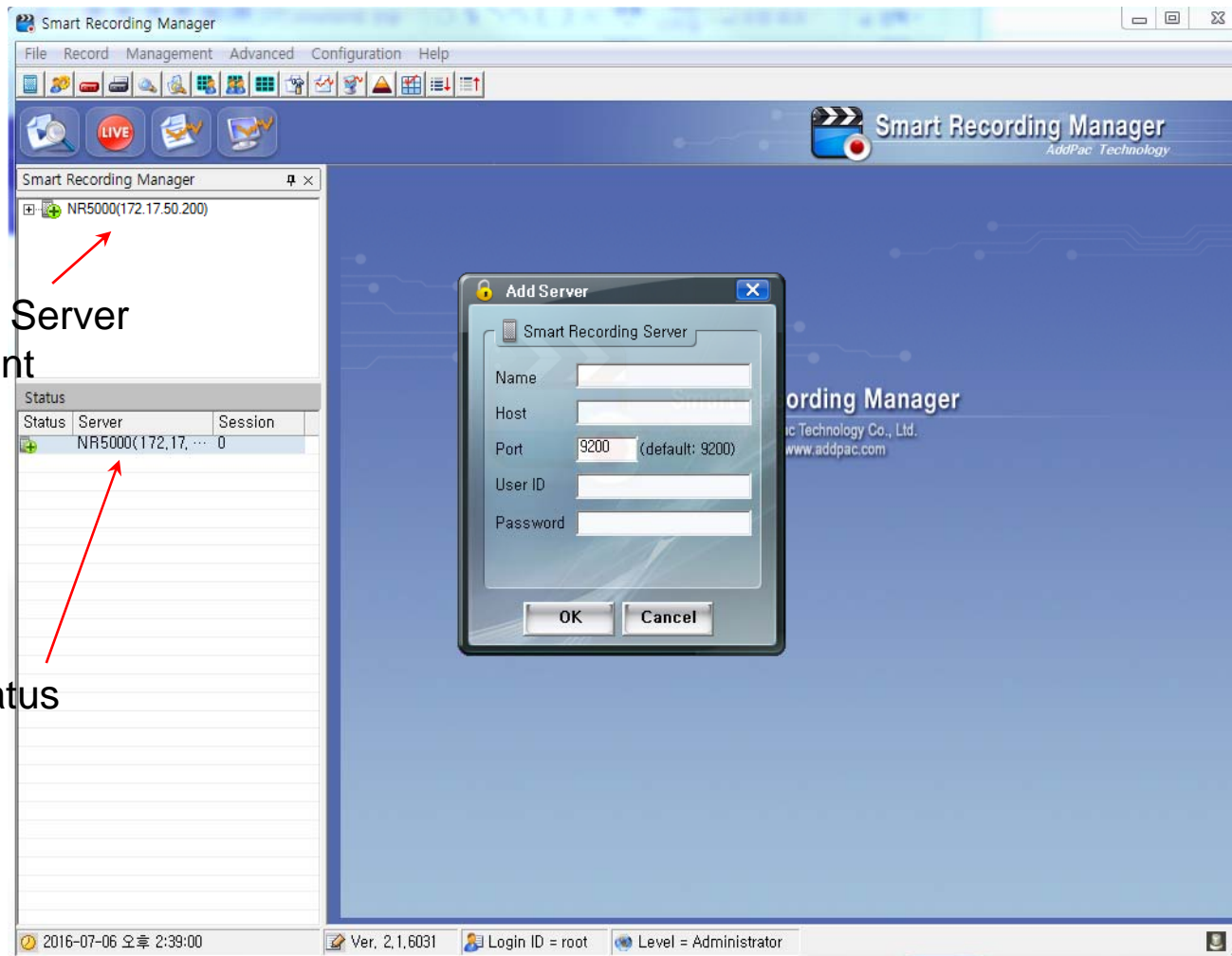
Recording Server Status Monitoring

Client List

Recording File Management

Recording File Play with VLC application

Live Call Monitoring

Export Recording History

Event Configuration

Event Management
(Monitoring)

Event Management
(System Monitoring)

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Recording Board
(User)

Recording Board
(Group)

Recording Board
(Map)

Recording Board
(Map Editing and user monitoring)

Smart Recording File Manager
(Recorded Call List Search)

Smart Recording File Manager
(Configuration)
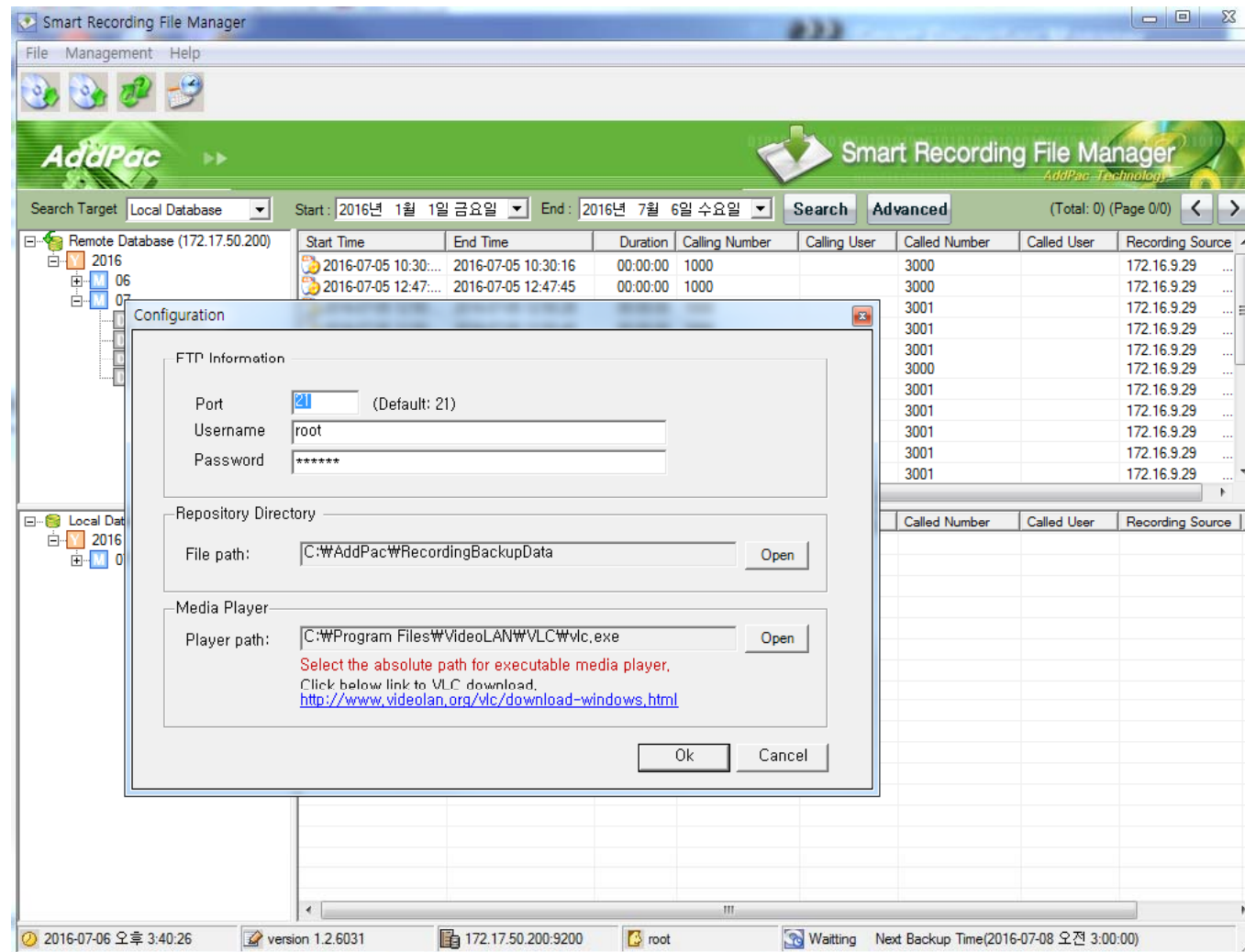
Smart Recording File Manager
(Call List Properties)

Smart Recording File Manager
(Server to Local Backup)

Smart Recording File Manager
(Recorded Call List Search)

Smart Recording File Manager
(Periodical Backup)

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Application Service

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

IP Video Door Phone Application

Door Phone 1
AP-VAC50

Door Phone 2
AP-VAC50

Door Phone N
AP-VAC50

register

LAN

ACS1000
(Door Access Control Server)

register

LAN

Door Access Center

[Ethernet]

Video Call Recording

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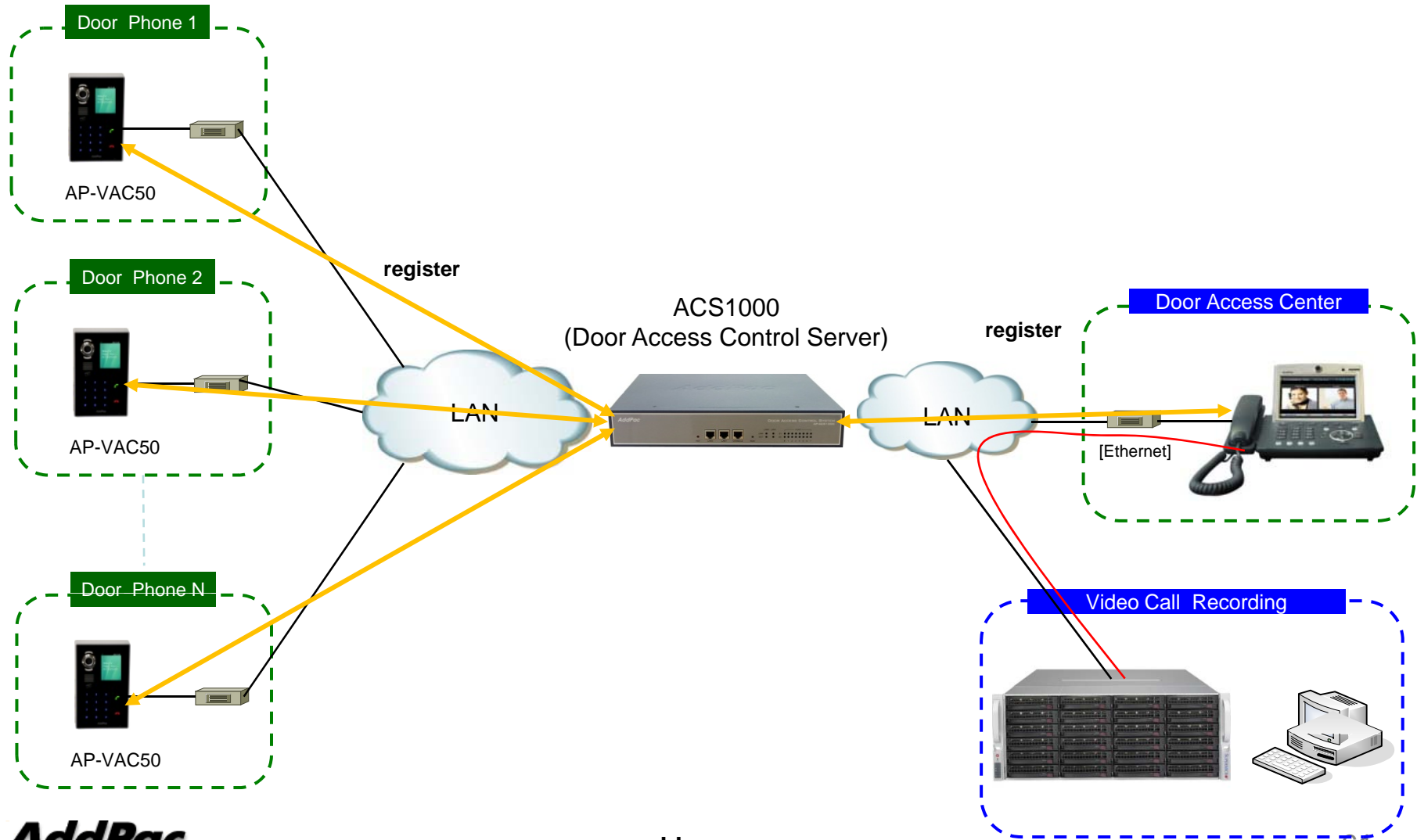
Emergency Video Call Center Application

Emergency Call Video Phone Group 1

1
2
M

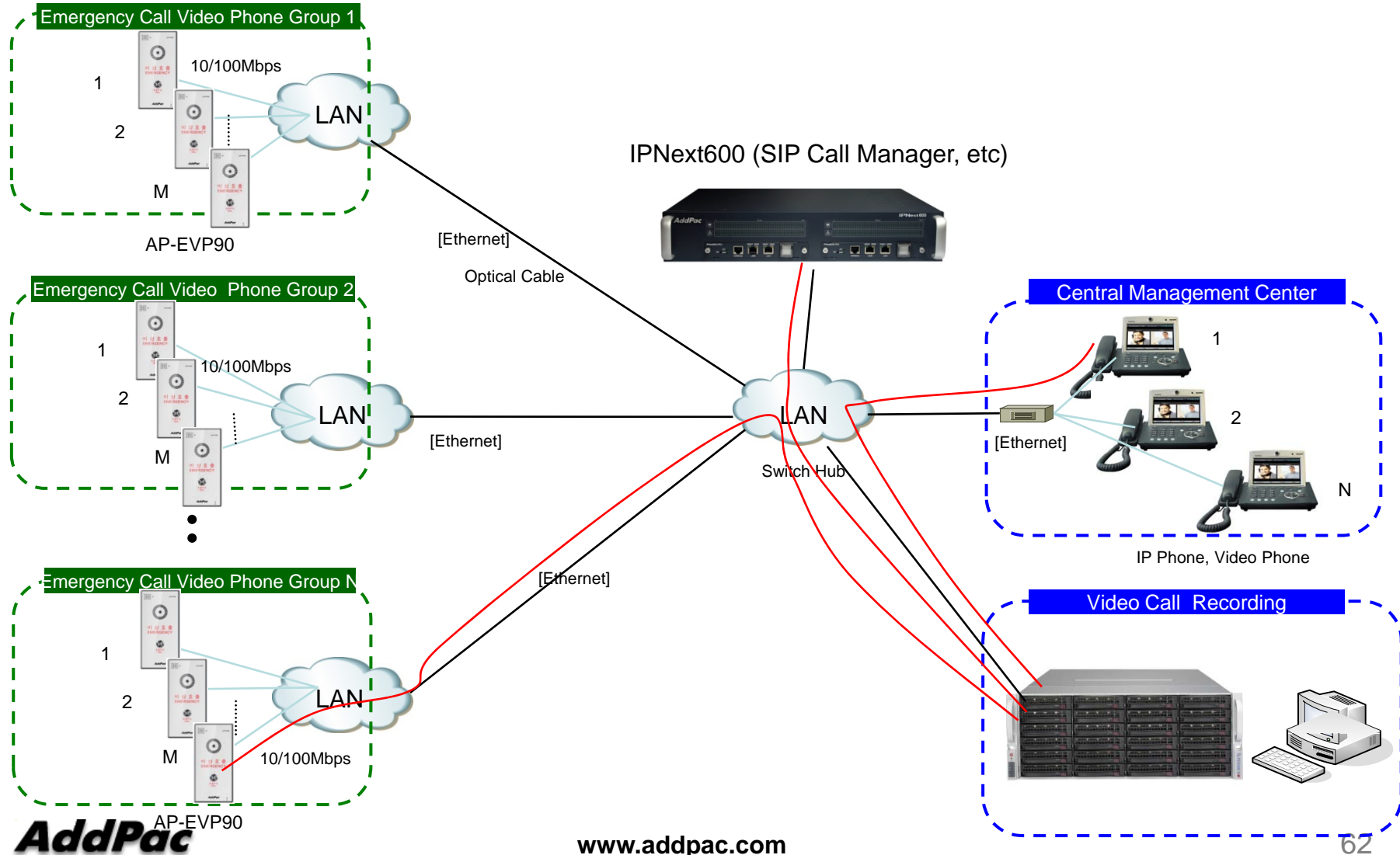10/100Mbps

LAN

AP-EVP90

Emergency Call Video Phone Group 2

1
2
M

10/100Mbps

LAN

[Ethernet]

Emergency Call Video Phone Group N

1
2
M

10/100Mbps

LAN

AP-EVP90

[Ethernet]
Optical Cable

IPNext600 (SIP Call Manager, etc)

[Ethernet]

LAN
Switch Hub

Central Management Center

1
2
N

[Ethernet]

IP Phone, Video Phone

Video Call Recording

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Thank you!

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Sales and Marketing

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