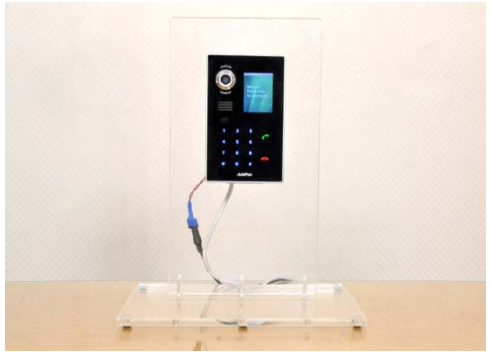
IP Video Door Phone Solution Application Note
(electric power corporation: underground power utility-pipe conduit)

AP-VAC50

AP-VP280

AP-ACS1000
(Door Access Control Server)



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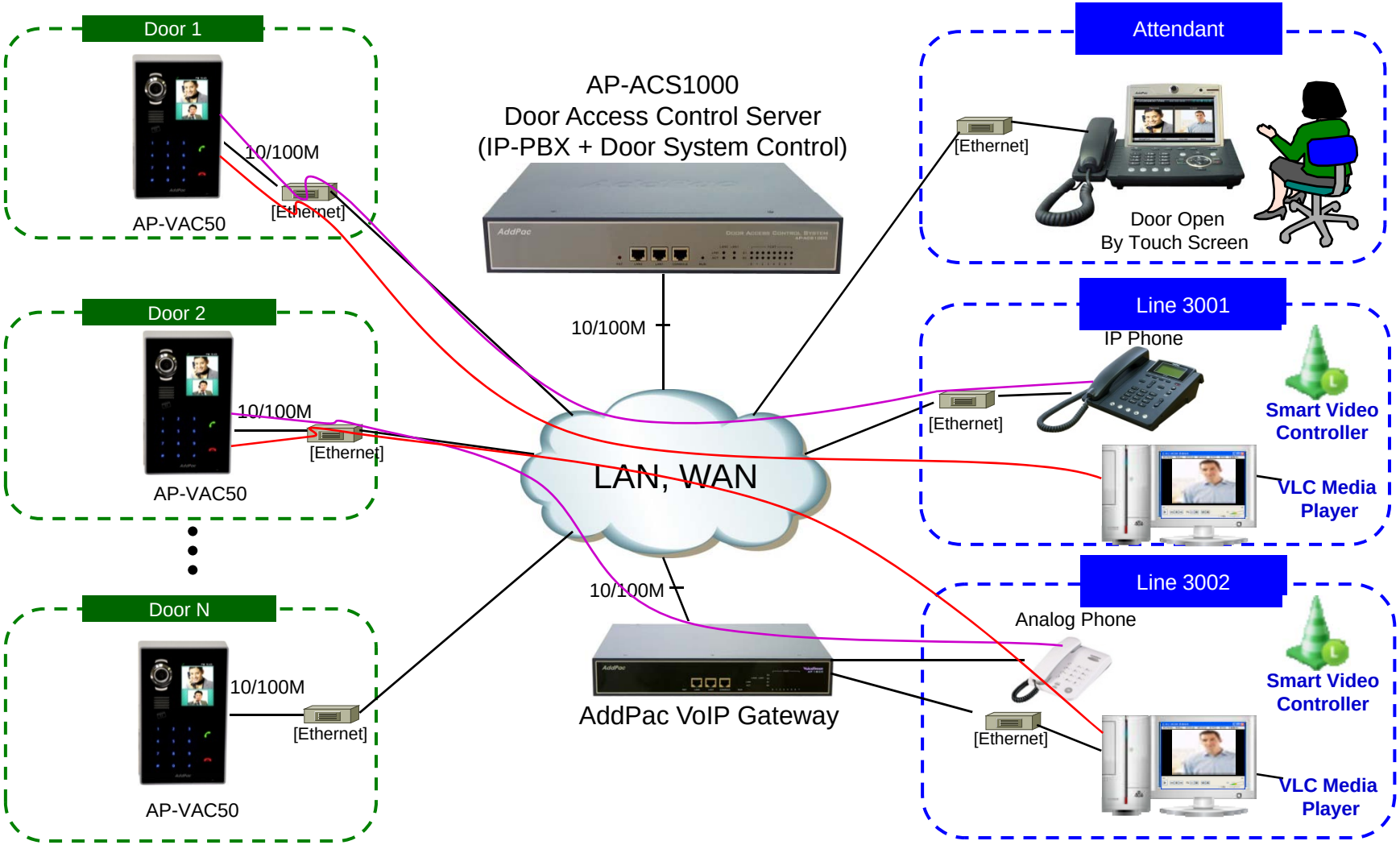
Contents

- IP Video Door Phone Solution Application Network Diagram
- IP Video Door Phone Solution Components
  - AP-VAC50 IP Video Door Phone
  - AP-ACS100 Door Access Control Server & Web based Video Access Control Client(User registration, etc)
  - Smart Video Controller : Video Only Door Control S/W for Desktop
  - AP-VP280 Video Phone

IP Video Door Phone Application



IP Video Door Phone Solution Components

AP-VAC50
IP Video Door Phone

Main Features

AP-VAC50 IP Video Door Phone

- High Performance IP Video Door Phone Solution
- Video Camera, 3x4 Key, TFT Color LCD, Internal MIC & Speaker
- H.323/SIP Concurrent VoIP Signaling Stack Embedded
- RF Card Interface
- 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
- Powerful Network Protocols (PPPoE, DHCP, Static Routing, etc)
- Firmware Upgradeable Architecture
- Advanced Voice QoS Mechanism

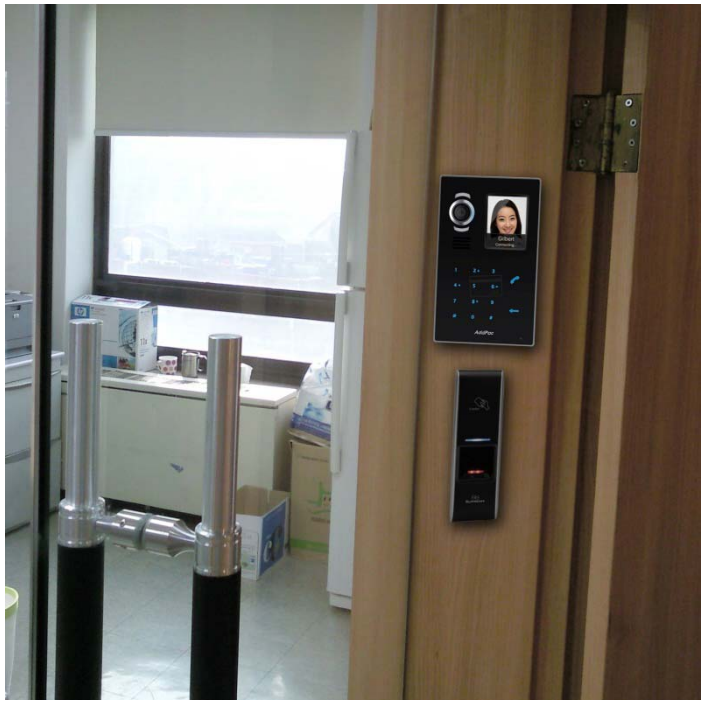
Hardware Specification

AP-VAC50 IP Video Door Phone

RISC CPU

High-end DSP

- RISC+DSP Microprocessor Computing Power (Dual Processor Architecture)
- Audio and Voice Interface
  - Internal MIC
  - Internal Speaker
  - 3 x 4 key PAD
- Video Camera Interface
- 2 Inch TFT Color LCD Interface
- RF Card Interface
- Network Interface
  - One(1) 10/100Mbps Fast Ethernet
- Alarm & Relay Out Interface (door open, etc)
- RS232/RS422/RS485 Interface
- Power Supply
  - Power over Ethernet (Option)
  - External Power Supply



Hardware Specification

AP-VAC50 IP Video Door Phone

RISC CPU

High-end DSP

Front Side

Video Camera

Internal Speaker

LCD Display

3 x 4 Dial Key

RF Card Interface

Internal MIC Input

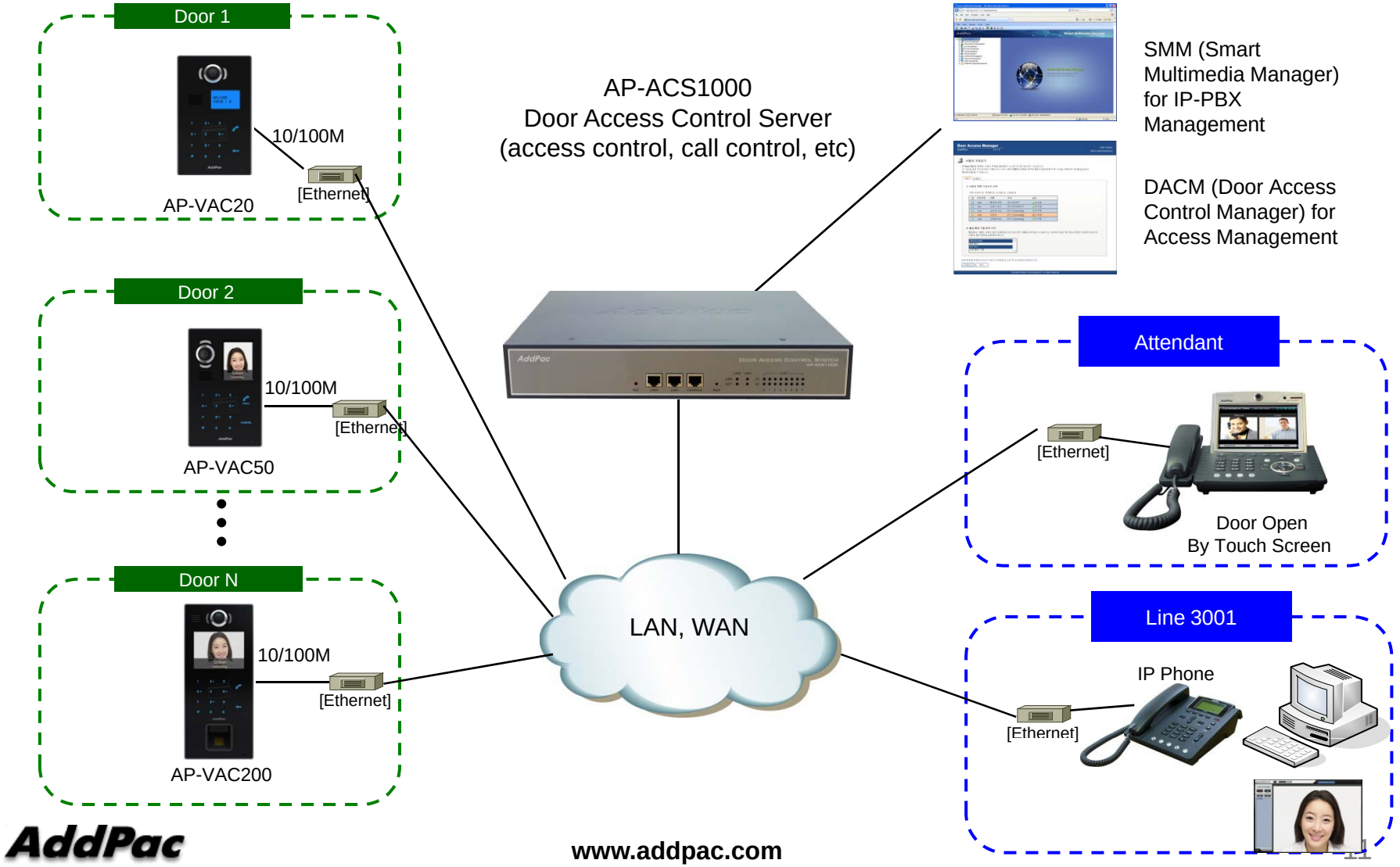
AP-ACS1000
Door Access Control Server

Contents

- DACS(Door Access Control Server) Network Diagram
- AP-ACS1000 DACS Main Features
- AP-ACS1000 DACS Hardware Specification
- DACS System Message Flow (Examples)
- DACM (Door Access Control Manager)
- Open API for Third Party Controller

Integrated Door Access Control and Call Control

AP-ACS1000 DACS (Door Access Control Server)



AP-ACS1000
Door Access Control Server

Main Features

AP-ACS1000 DACS (Door Access Control System)

- Door Access Control Application System
- SIP Application Server, Proxy, Registrar and Location Server
- Multiple ITSP Trunk with SIP & H.323 Accounts Support
- Legacy PBX Interworking Service
- High Performance RISC & Programmable DSP Architecture
- Two(2) 10/100Mbps Fast Ethernet (IP Share ,etc)
- High Performance LAN-to-LAN Routing Capability
- Powerful Network Protocols (PPPoE, DHCP, Static Routing, etc)
- IPv4/IPv6 Dual Stack
- Firmware Upgradeable Architecture
- Smart Multimedia Manager for IP-PBX Management
- DACM(Door Access Control Manager)
- Advanced Voice QoS Mechanism
- Small, Light and Compact Design
- Two(2) VoIP Module Slots for Analog, Digital Interface

Main Features

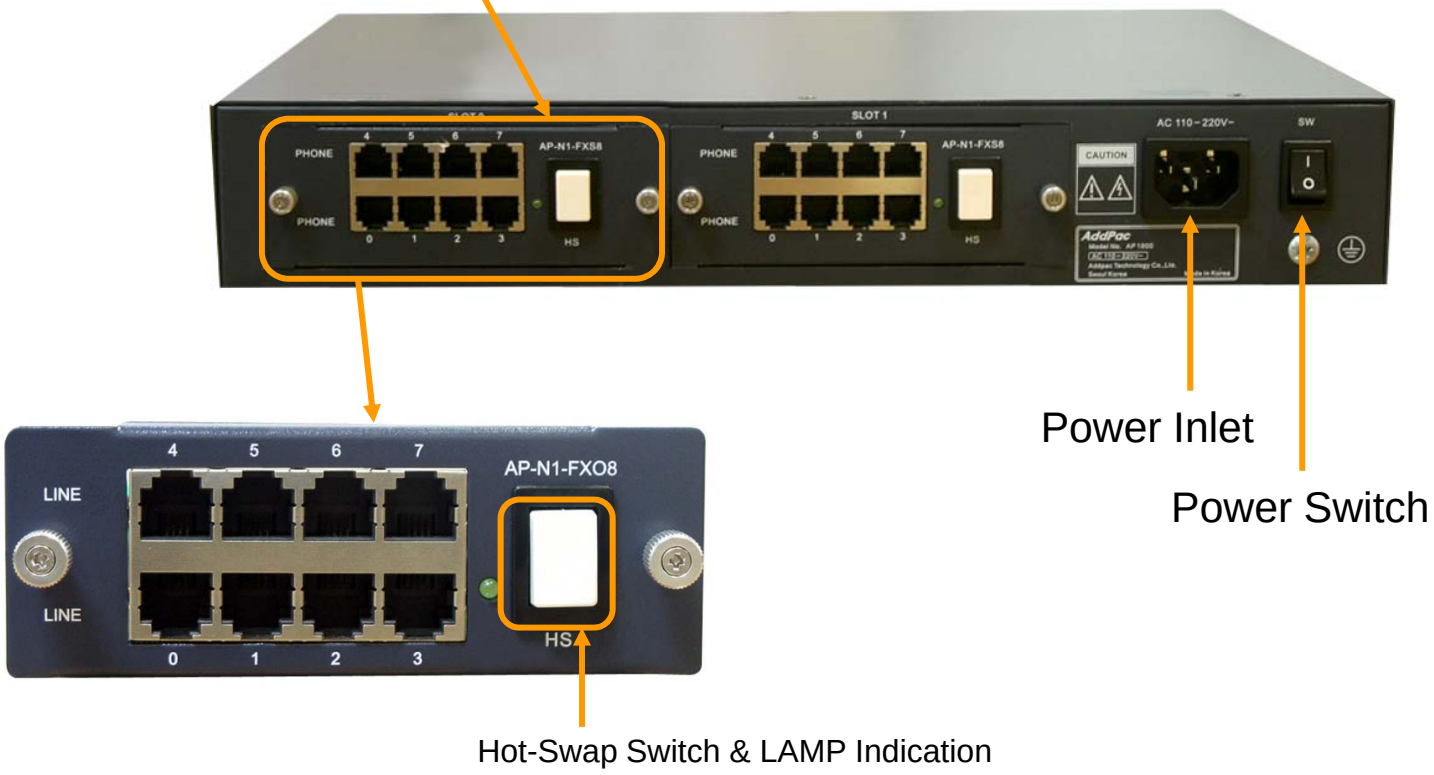
AP-ACS1000 DACS (Door Access Control System)

- RISC Microprocessor Computing Power
- Main Chassis
  - Network Interface
    - Two(2) 10/100Mbps Fast Ethernet
    - One(1) RS-232C Console (RJ45)
  - Two(2) VoIP Module Slots for FXS, FXO etc

Hardware Specification

AP-ACS1000 DACS (Door Access Control System)

AP-ACS1000 Back Side



Hardware Specification

AP-ACS1000 DACS (Door Access Control System)

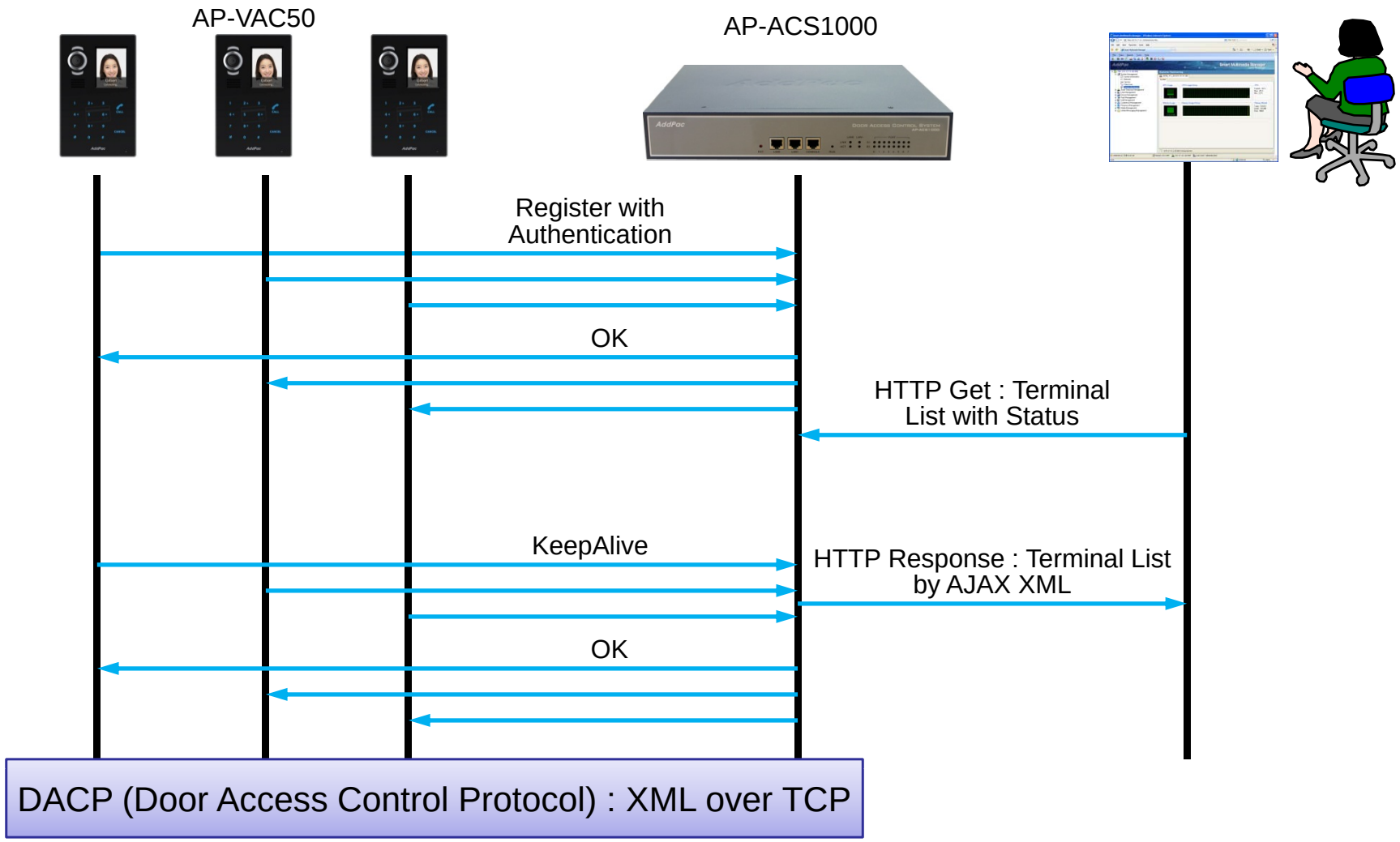
PSTN Interface Module

AP-N1-FXS8		8-Port FXS Voice Processing Module (8 x RJ11)
AP-N1-FXO8		8-Port FXO Voice Processing Module (8 x RJ11)
AP-N1-FXO4S4		4-Port FXO and 4-Port FXS Voice Processing Module (8 x RJ11)
AP-N1-E1T1		1-Port VoIP Digital E1/T1 Interface Module(1xRJ45)

DACS
System Message Flow

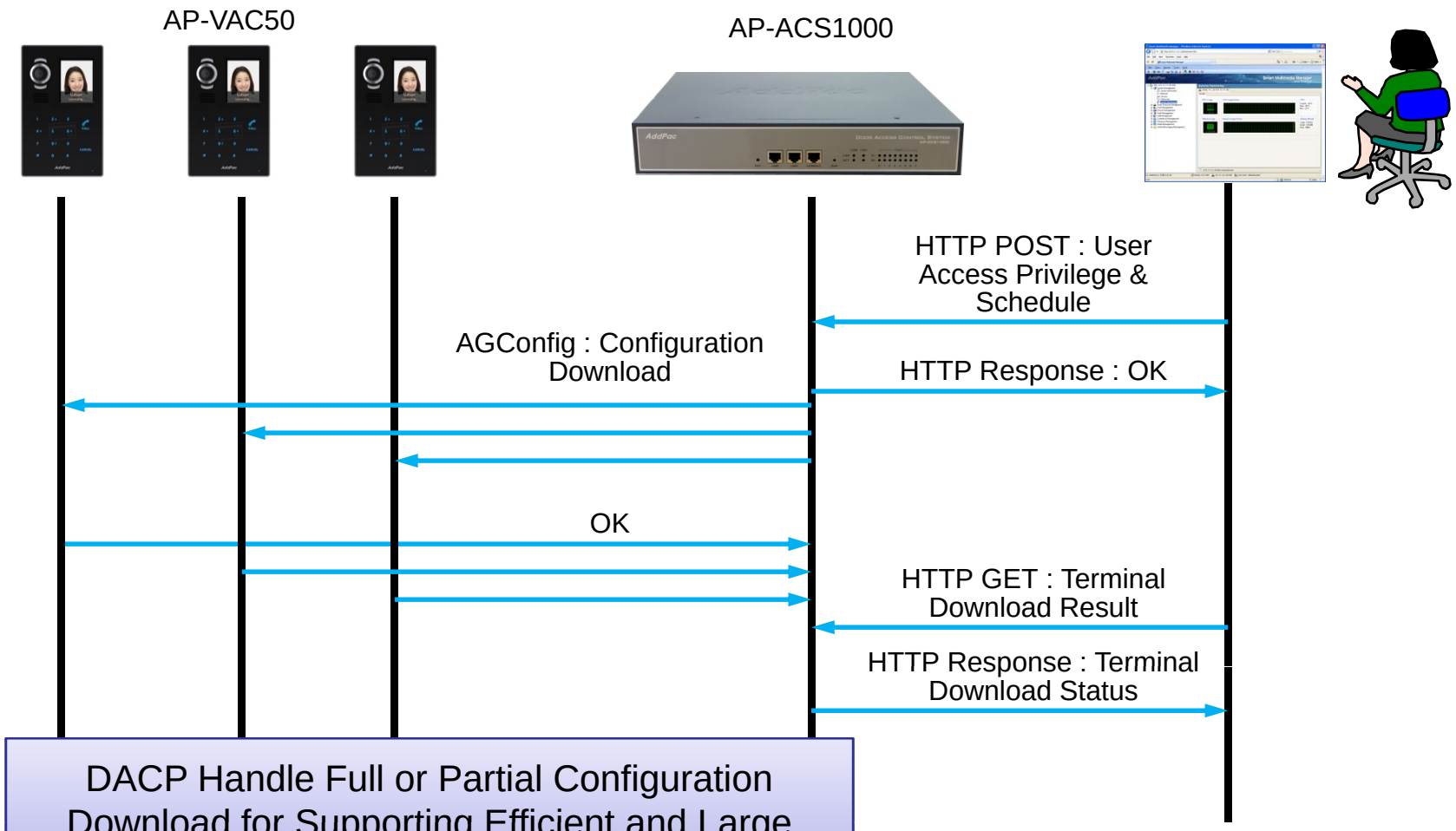
DACS System Message Flow

Registration and KeepAlive



DACS System Message Flow

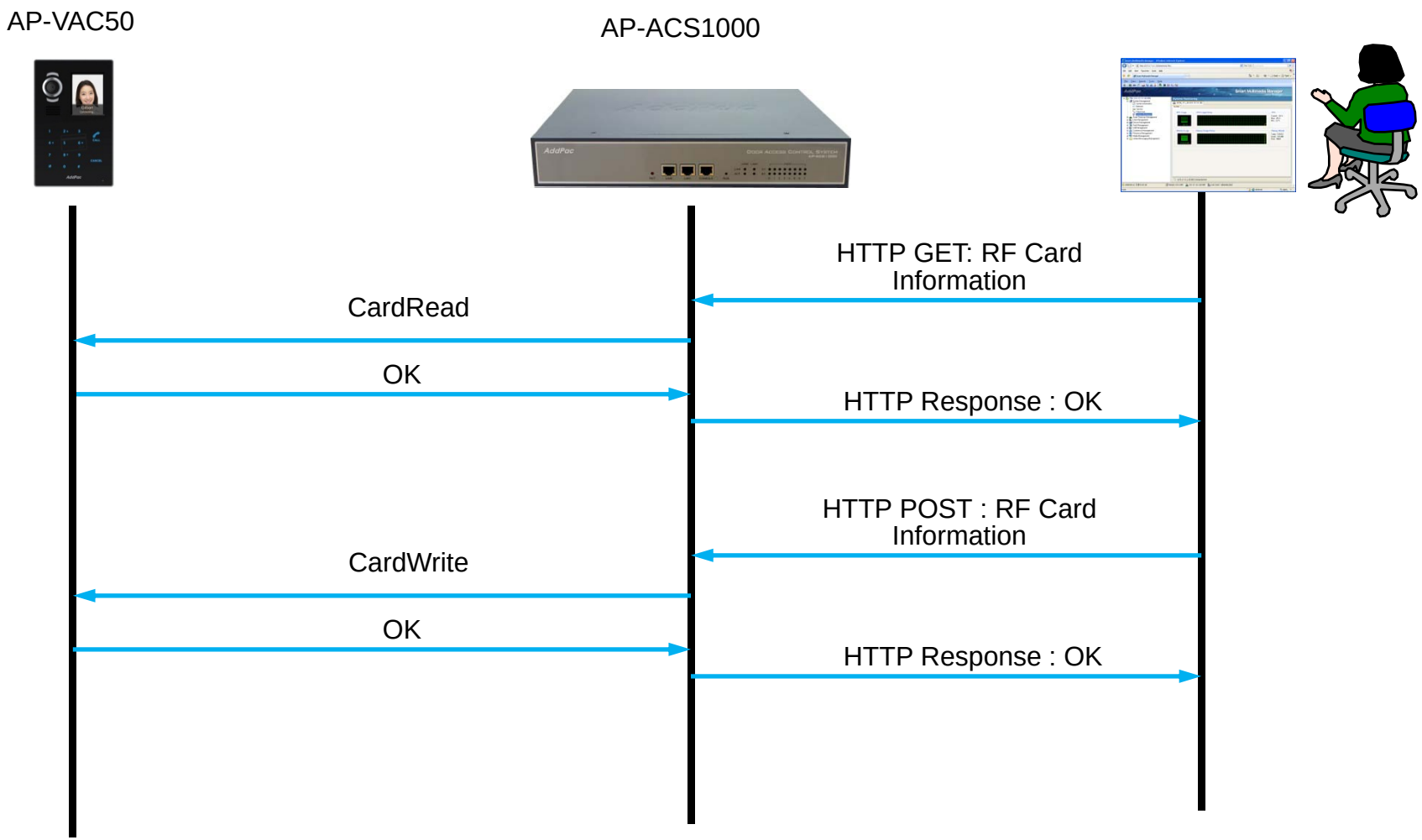
Access Privilege and Schedule Download



DACP Handle Full or Partial Configuration Download for Supporting Efficient and Large Scale Network

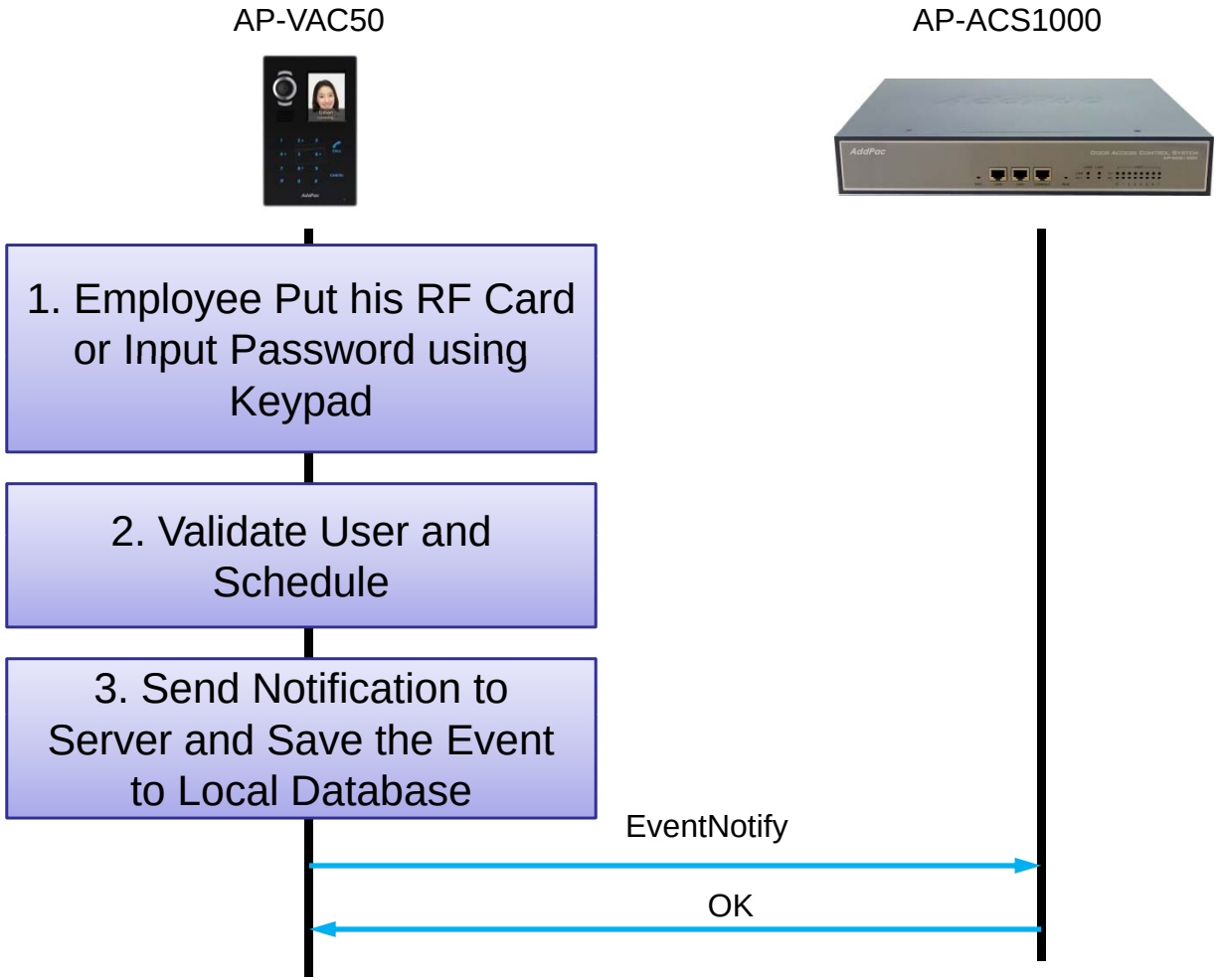
DACS System Message Flow

RF Card Read/Write and Registration



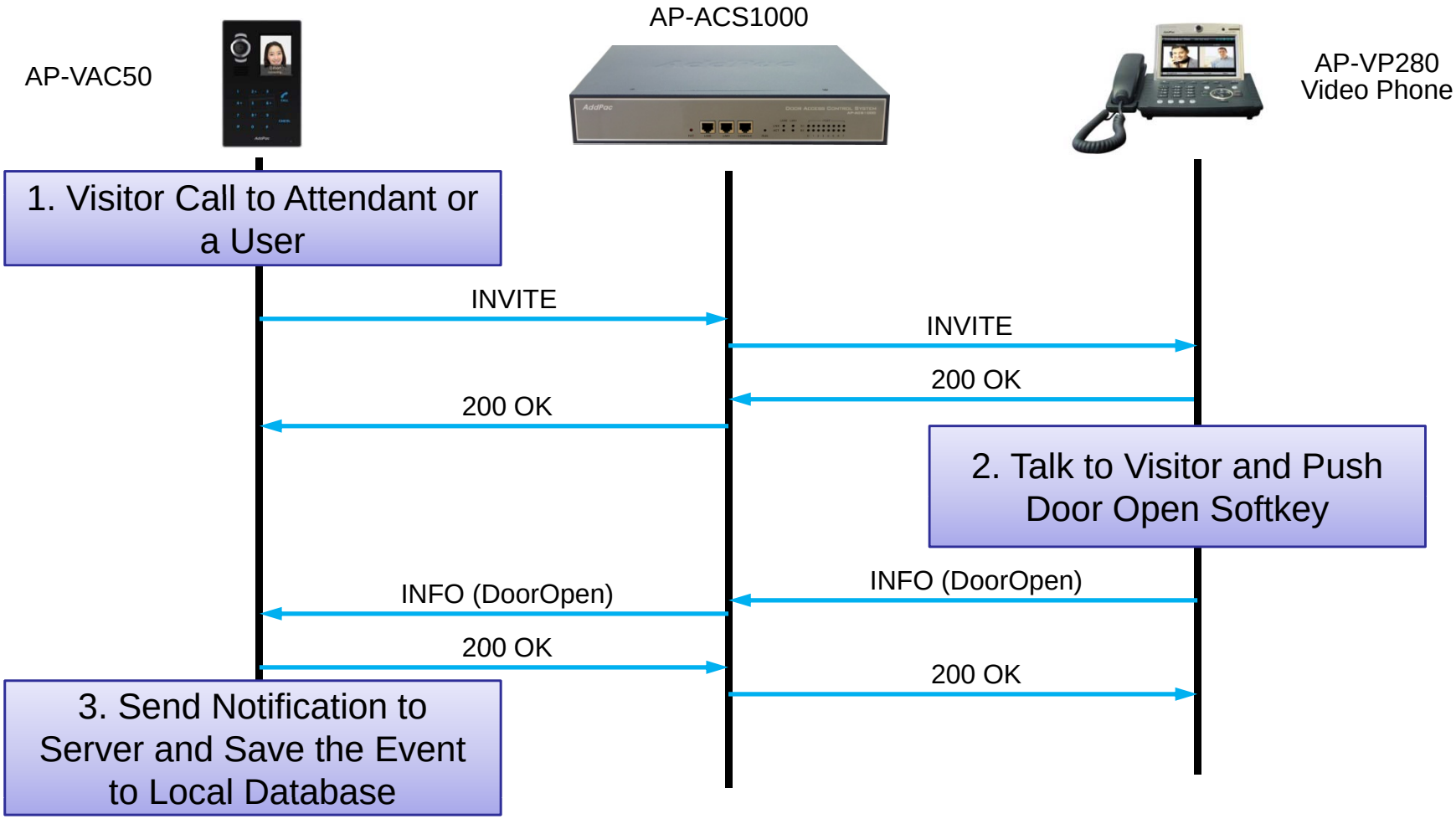
DACS System Message Flow

Door Open by RF Card or Password



DACS System Message Flow

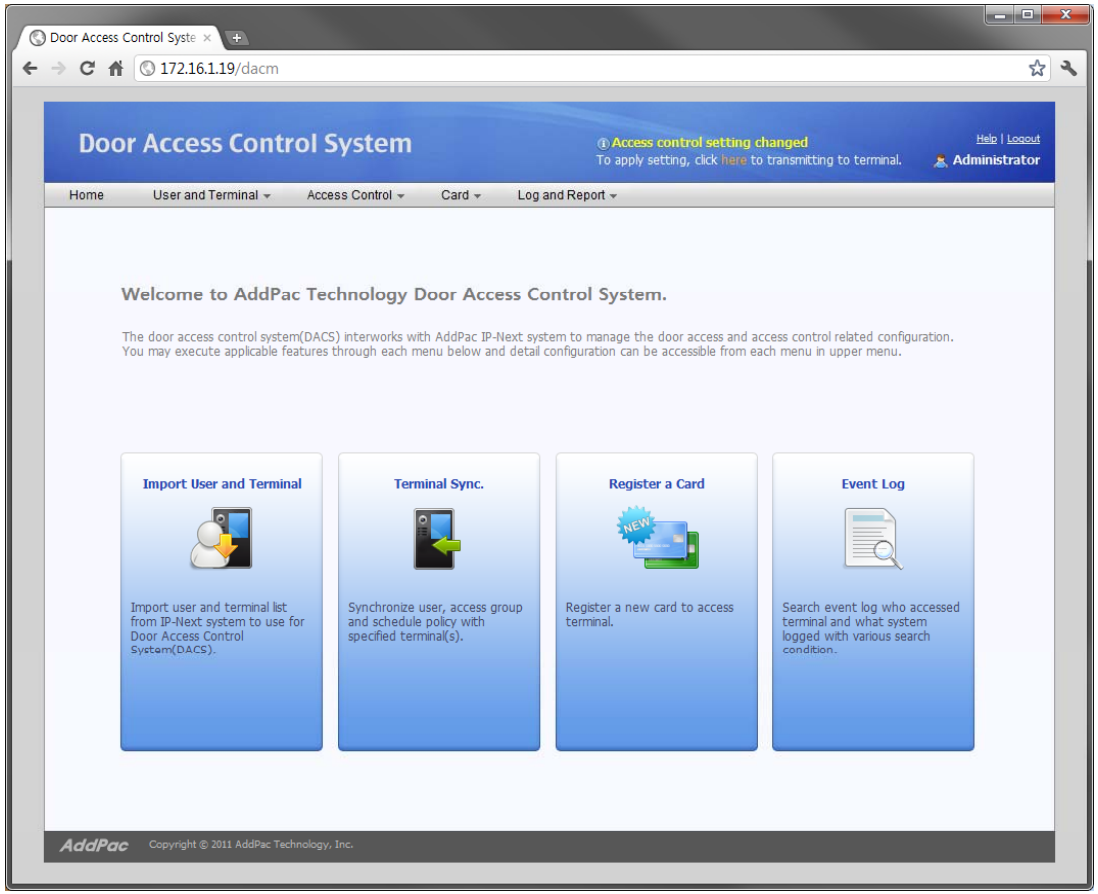
Door Open by Other Terminal



Door Access Control Manager for AP-ACS1000

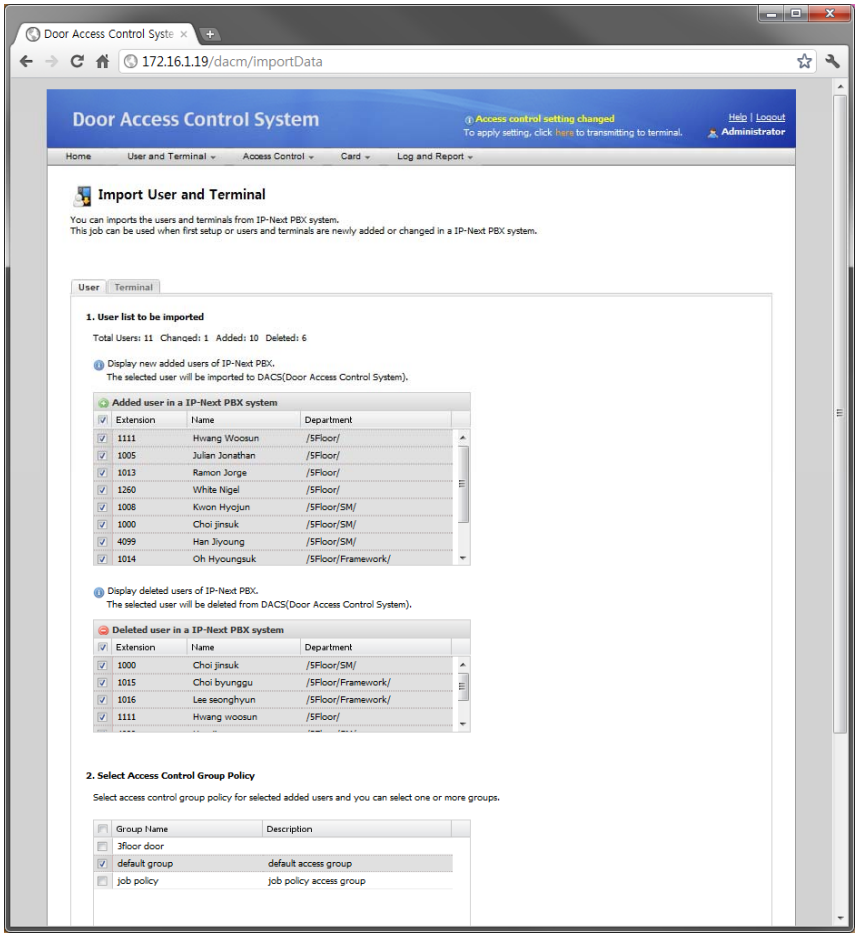
DACM (Door Access Control Manager)

Main Web Page



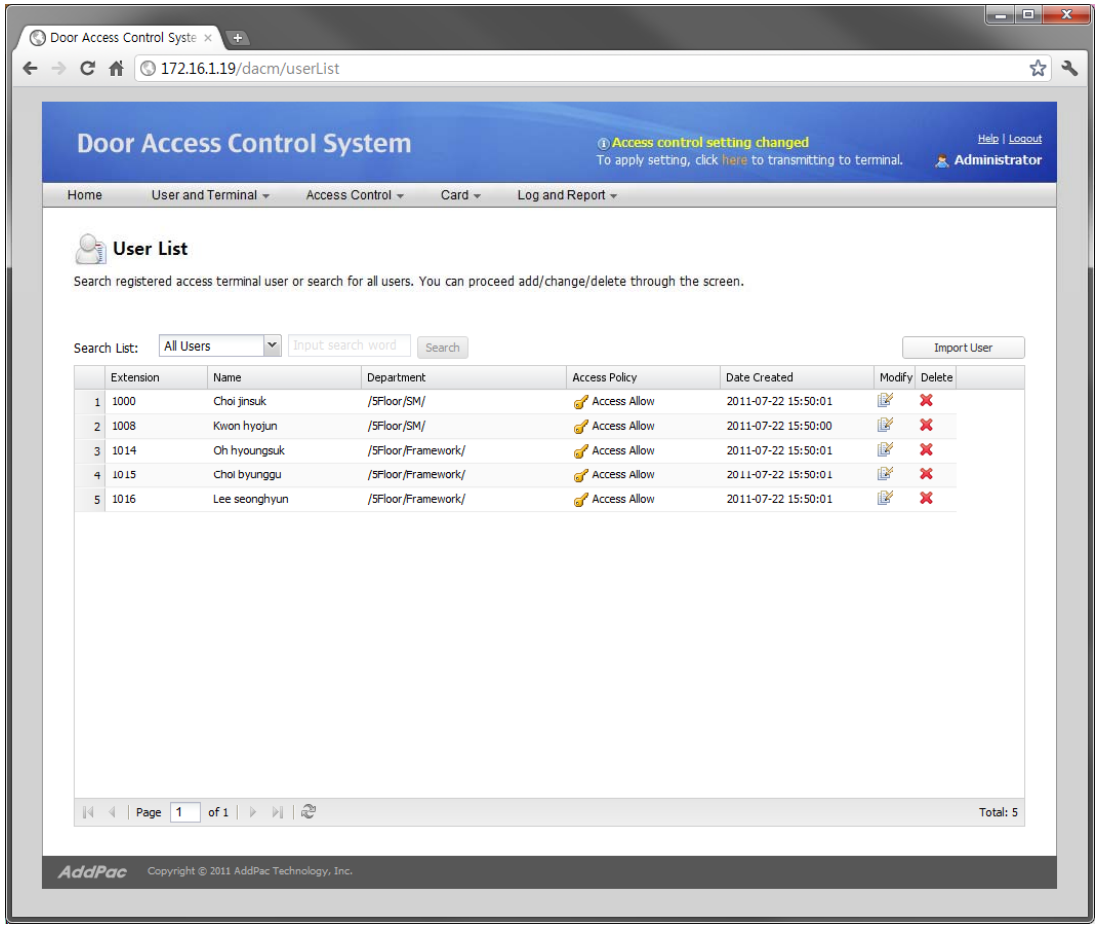
DACM (Door Access Control Manager)

Import User and Terminal



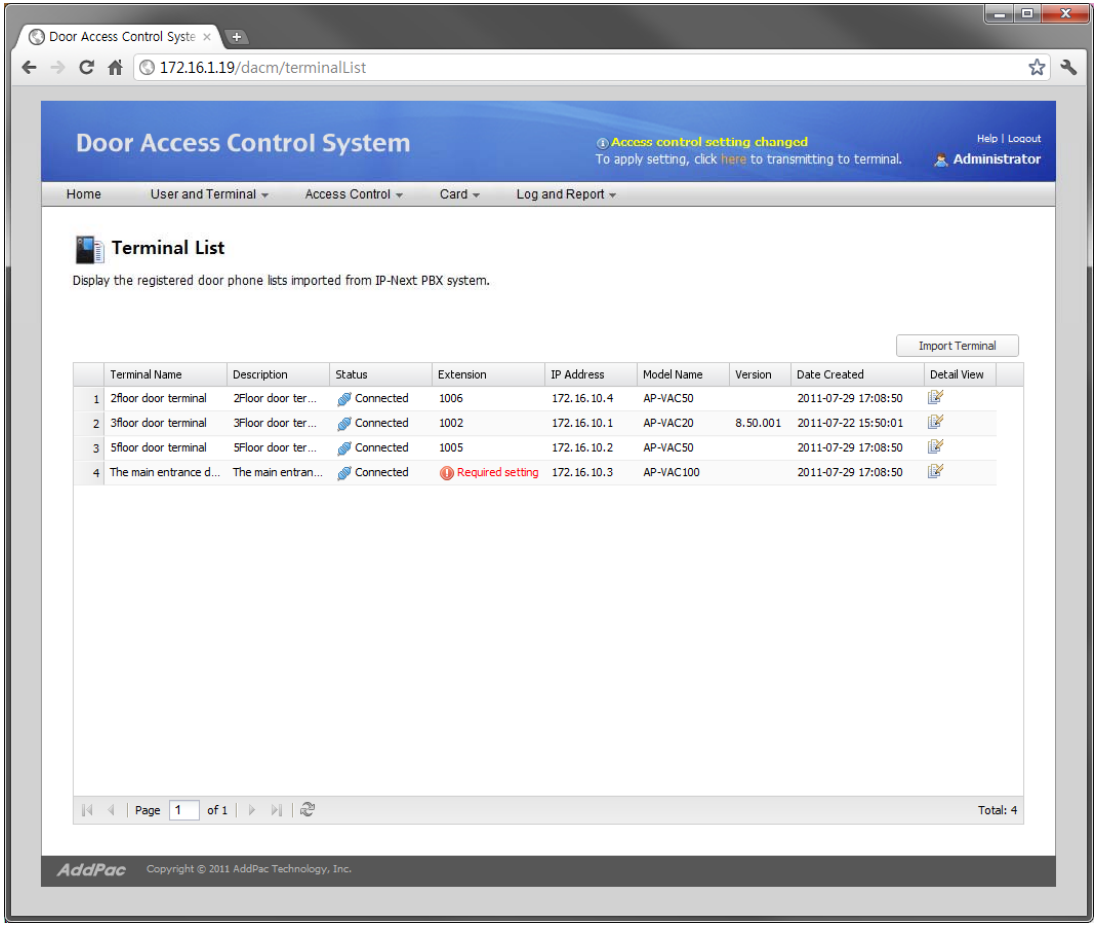
DACM (Door Access Control Manager)

User List



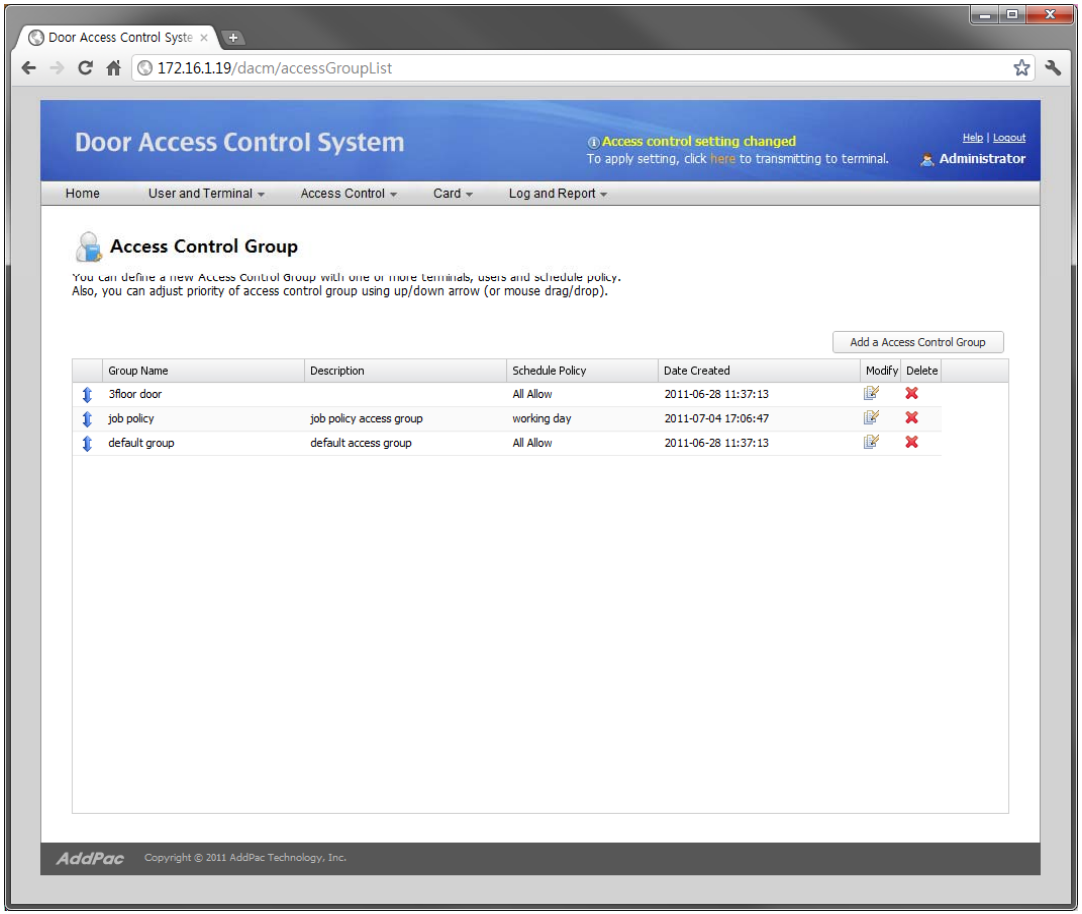
DACM (Door Access Control Manager)

Terminal List



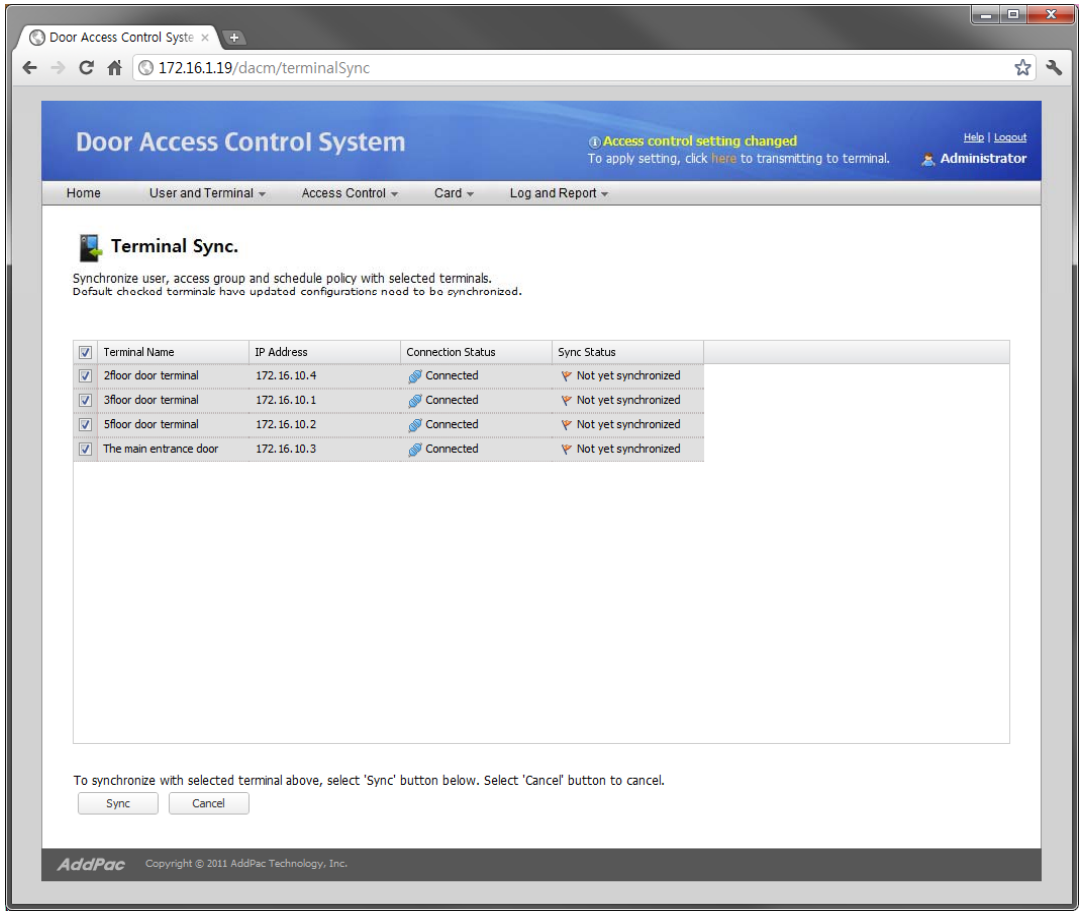
DACM (Door Access Control Manager)

Access Control Group Management



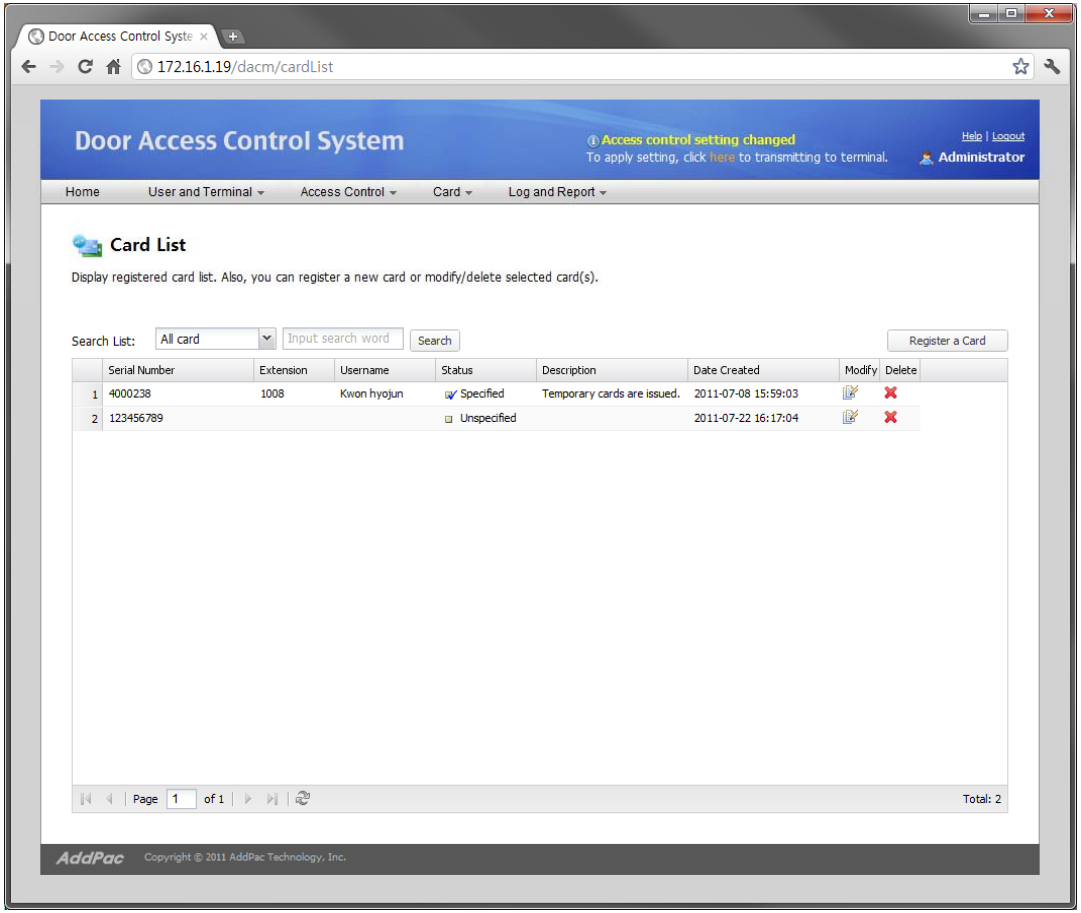
DACM (Door Access Control Manager)

Configuration Download to Terminal



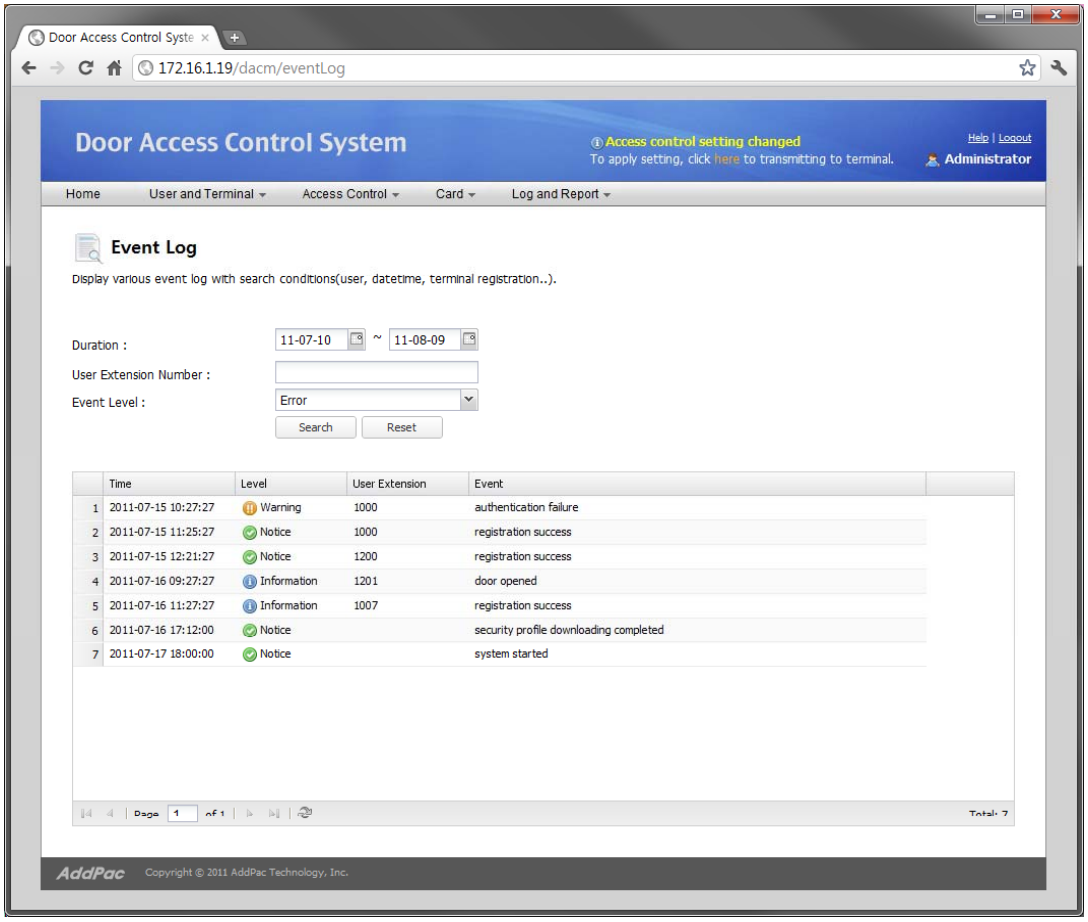
DACM (Door Access Control Manager)

RF Card Management



DACM (Door Access Control Manager)

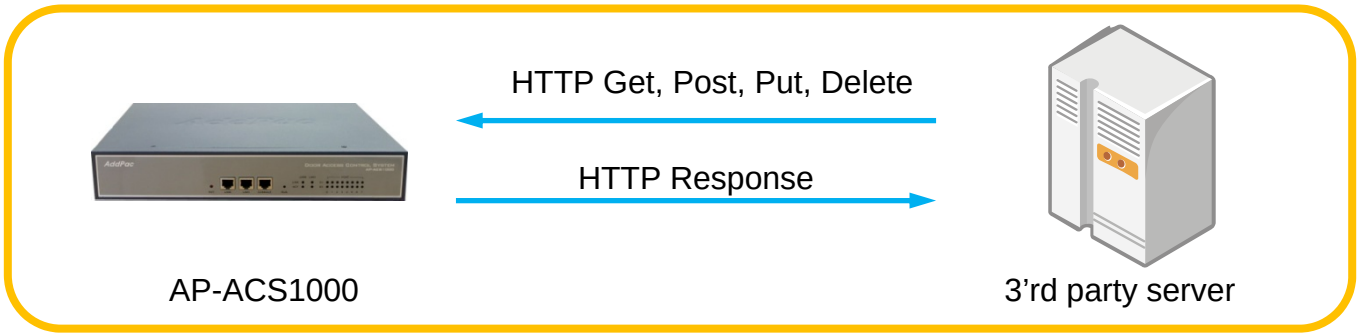
Access Log Management



AP-ACS1000 Open API

Open API

Open API for 3’rd Party Management System



- HTTP based RESTful Open API for Door Access Management
- XML based Flexible and Expandable Message Contents
- Provides More than 40 APIs as Bellow
  - user_list(GET), user(GET, POST, PUT, DELETE), …
  - terminal_list(GET), terminal(GET, POST, PUT, DELETE), …
  - access_group(GET, POST, PUT, DELETE), priority (PUT), …
  - card_list(GET), card(POST, PUT, DELETE), …
  - schedule_template(GET, POST, PUT, DELETE), rule(GET, POST, PUT, DELETE) ,…

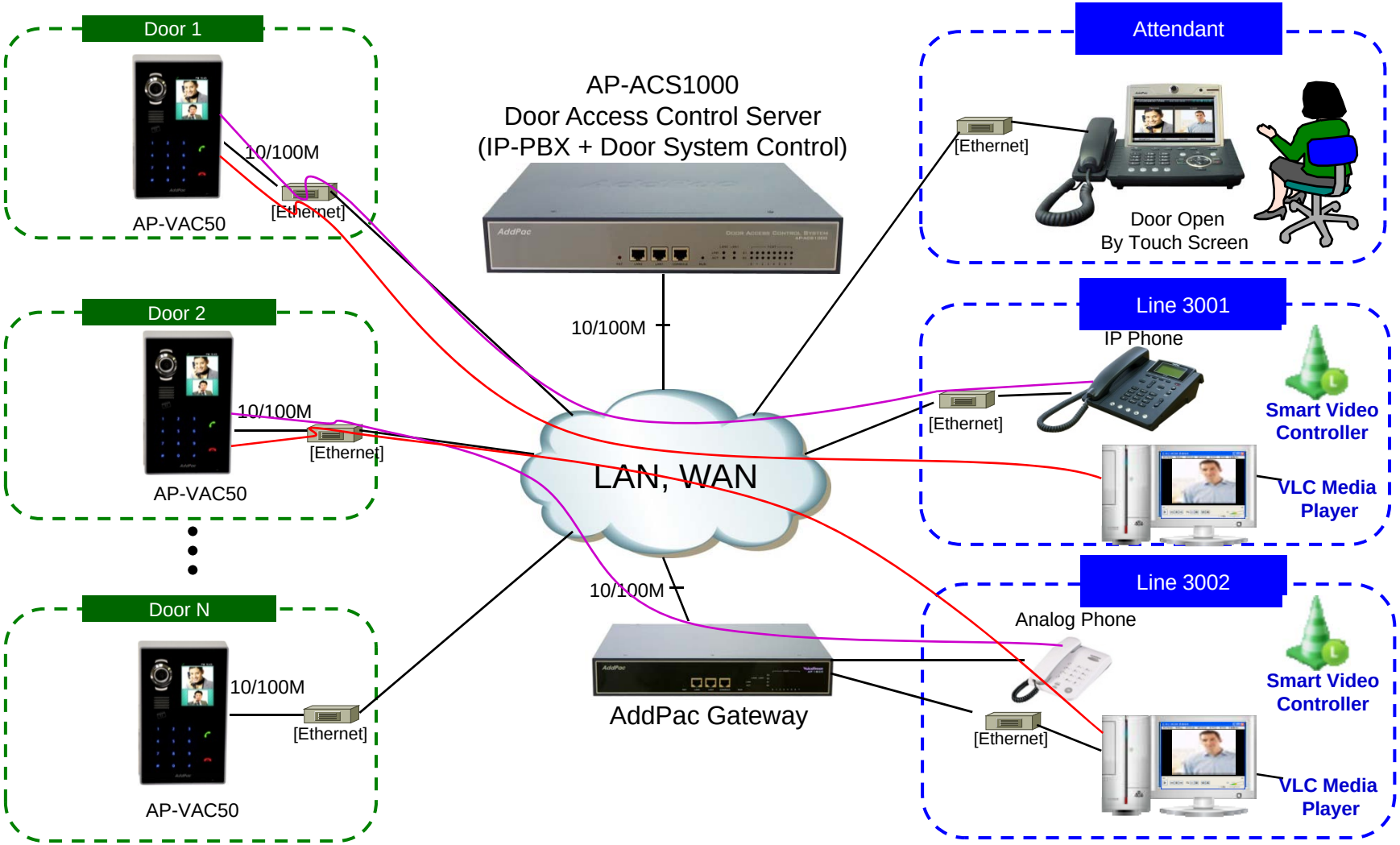
Smart Video Controller : Automatic Video PopUp Service in Desktop PC

Contents

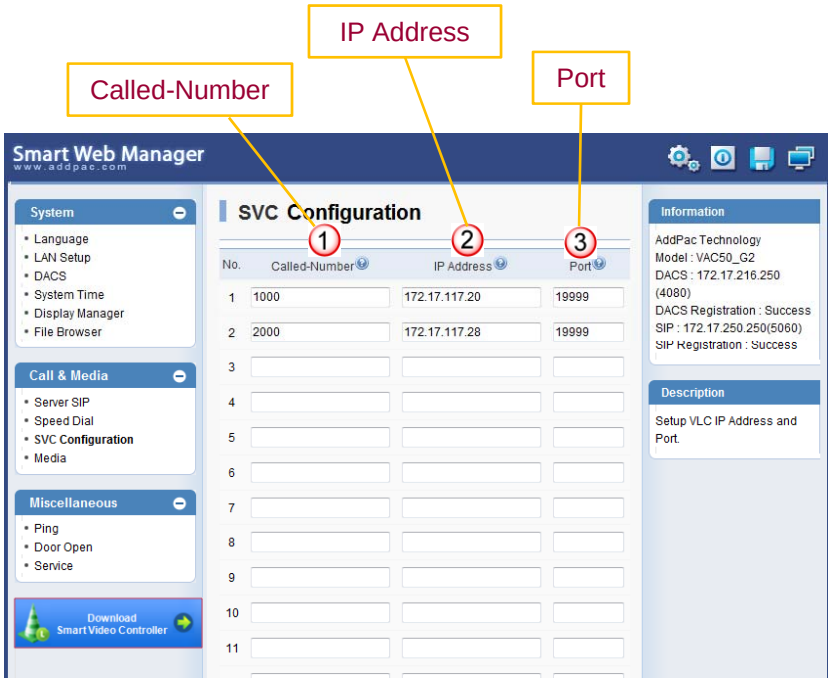
Overview

- Smart Video Controller Features
  - MS Window based Program : XP, Vista, Window7 support
  - Voice : IP Phone or Analog Phone(Legacy PBX)
  - Video: MS Window Program, PC based Video Decoder & Displayer
  - RTSP(Real Time Streaming Protocol) Protocol Support
  - Video Communication Service for general analog phone, IP phone user
    I. VAC50 to IP Phone with VLC Player
    II. VAC50 to Analog Phone with VLC Player

Smart Video Controller Service Diagram



Smart Video Controller Configuration



[Figure 1]
AP-VAC50 Smart Web

1	Internal extension (line) number for voice only terminal such as analog phone, IP Phone, etc.
2	Personal Computer's IP Address
3	Port Number (Default .19999)

Smart Video Controller Configuration (Cont.)

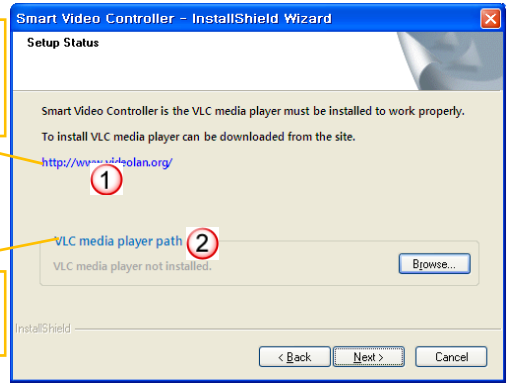
Smart Video Controller Program Setup

VLC Media Player Program must be pre-installed before Smart Video Controller program setup procedure.

(VLC Player is MS window software that support RTSP based Video Decoder & Display service

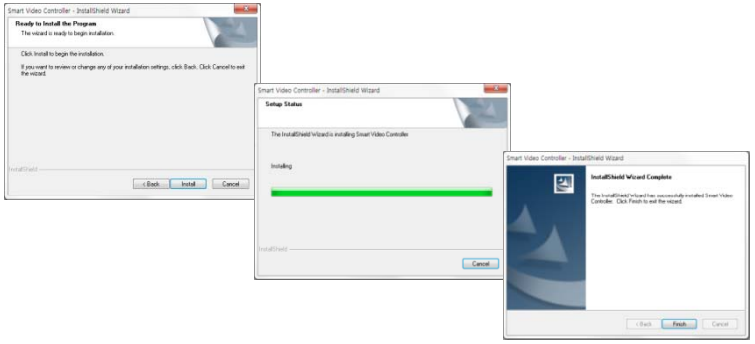
URL for download(VLC Media Player)

VLC Media Player Path

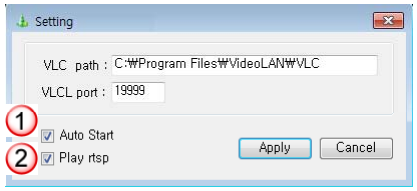


[Figure 1]
VLC Media Player Install Shield

1	VLC Program Download URL Address
2	VLC Program Execution File Path



[Figure 2]
Smart Video Controller Install Progress

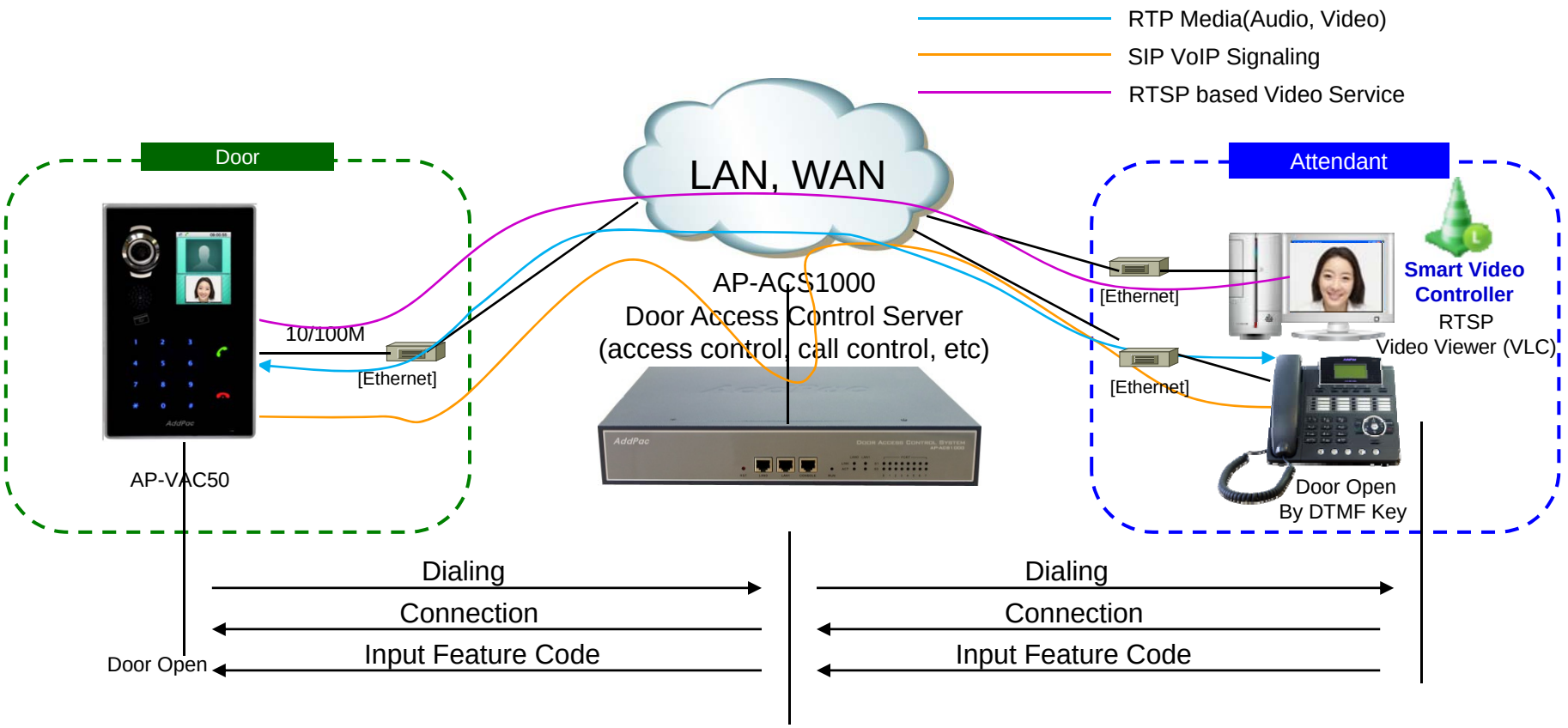


[Figure 3]
Smart Video Controller Setting

1	Program Auto Start at PC booting time
2	Program enable/disable

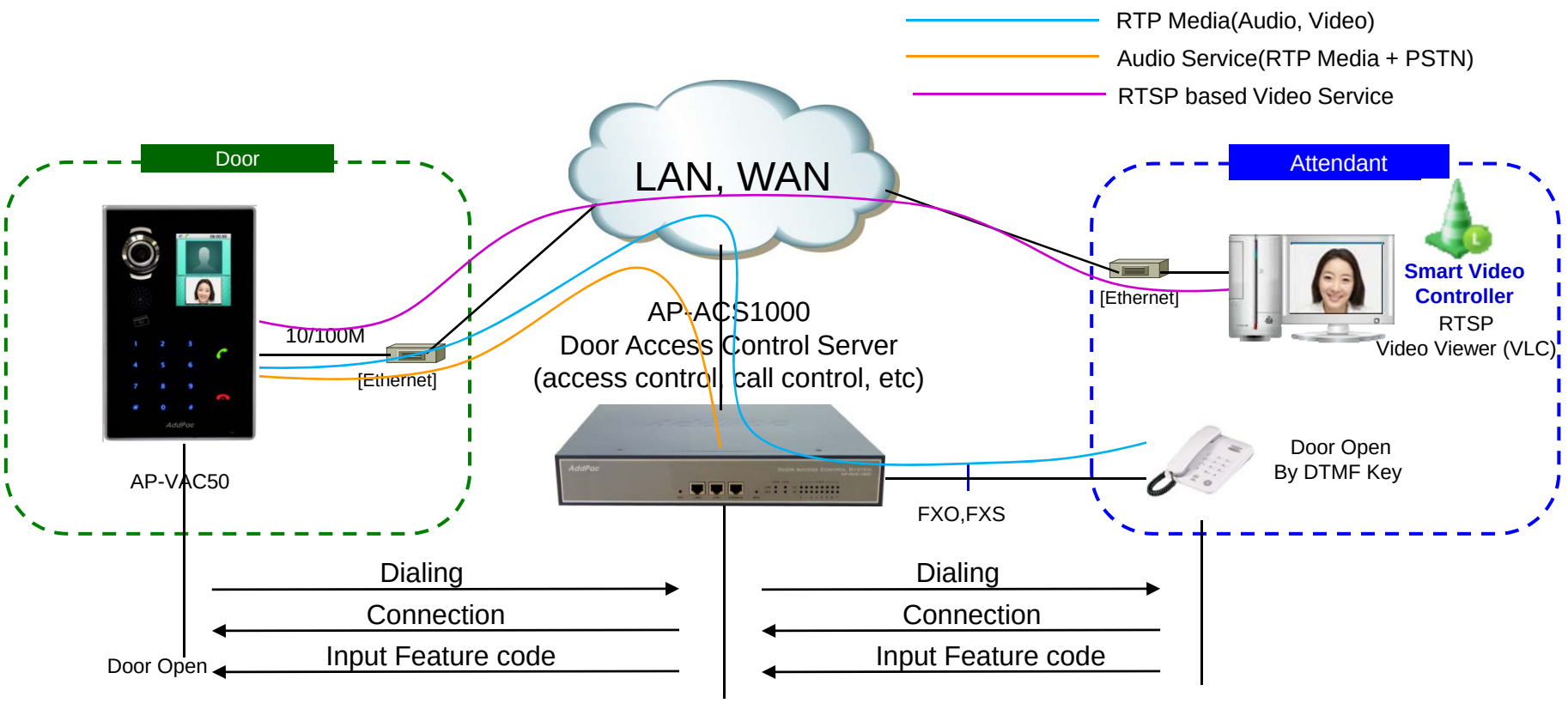
Smart Video Controller Service

: VAC50 to IP Phone with VLC

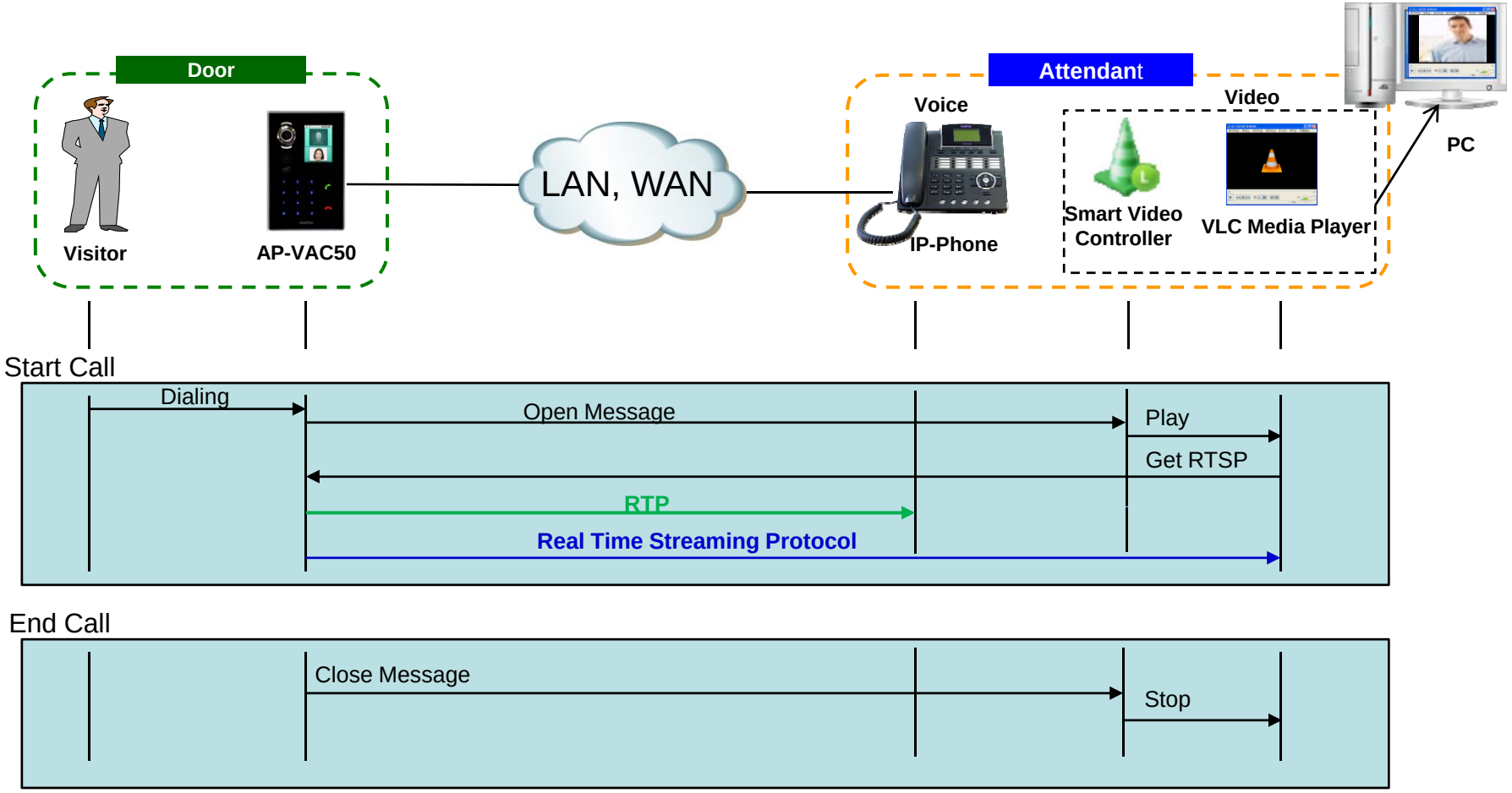


Smart Video Controller Service(Cont.)

: VAC50 to Analog Phone with VLC



Smart Video Controller Service Scenario



AP-VP280 Video Phone

IP Video Phone Comparison Table

	AP-VP500	AP-VP350	AP-VP300N	AP-VP280	AP-VP250	AP-VP230	AP-VP150	AP-VP120
								
LCD Size	12.1 Inch Touch Screen	7Inch Touch Screen	7Inch Touch Screen	7Inch Touch Screen	4.3Inch Touch Screen	5Inch Touch Screen	4.3Inch Touch Screen	4.3Inch
Camera	CCD	CCD	CCD	CMOS	CMOS	CMOS	CCD	CMOS
Video Codec	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264
Signaling	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP
Video MCU	N/A	4-Party Video MCU	N/A	N/A	N/A	N/A	N/A	N/A
Voice MCU	3-Party	3-Party	3-Party	3-Party	3-Party	3-Party	3-Party	3-Party
LAN Port	2	2	2	2	2	2	2	2
PoE	N/A	N/A	Support	N/A	Support	Support	Support	Support

AP-VP280
Video Phone

Video Phone

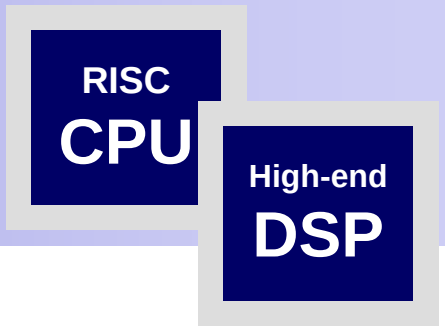
AP-VP280 Video Phone

Main Features

- 7 Inch LCD Display, Touch Screen
- H.323/SIP Concurrent VoIP Signaling Stack Embedded
- High-performance Video Codec Support
  - H.263, MPEG-4, JPEG, and H.264
- Powerful Image Resolution Support
  - QCIF(176x144), CIF(352x288), QVGA(320x240), and VGA(640x480)
- Two(2) 10/100Mbps Fast Ethernet (IP Share ,etc)
- G.711/G.726/G.723/G.729, etc
- Powerful Network Protocols (PPPoE, DHCP, Static Routing, etc)
- Rate Control for Video Traffic QoS
  - Ensuring Optimized Quality, Frame Rate with Limited Bandwidth
- Firmware Upgradeable Architecture
- VPMS (VoIP Plug&Play Management System) for Large Scale Deployment
- Advanced Voice QoS Mechanism

Video Phone

AP-VP280 Video Phone



Hardware Specification

- RISC Microprocessor Computing Power
- CMOS Image Sensor, Samsung LCD, Touch Screen
- High-end Programmable DSP Hardware Architecture
- Powerful Video Interface
  - RCA Video Input/Output, S-Video Output
- High quality Audio and Voice Interface
  - Stereo Audio Input & Output Connector
- Network Interface
  - Two(2) 10/100Mbps Fast Ethernet
  - One(1) RS-232C Console
  - One(1) USB 1.0 Interface
- PSTN Interface
  - One(1) FXO(RJ11) interface
- Power Supply
  - *External DC adaptor (5V)*

Video Phone

AP-VP280 Video Phone

RISC CPU

High-end DSP

Hardware Specification

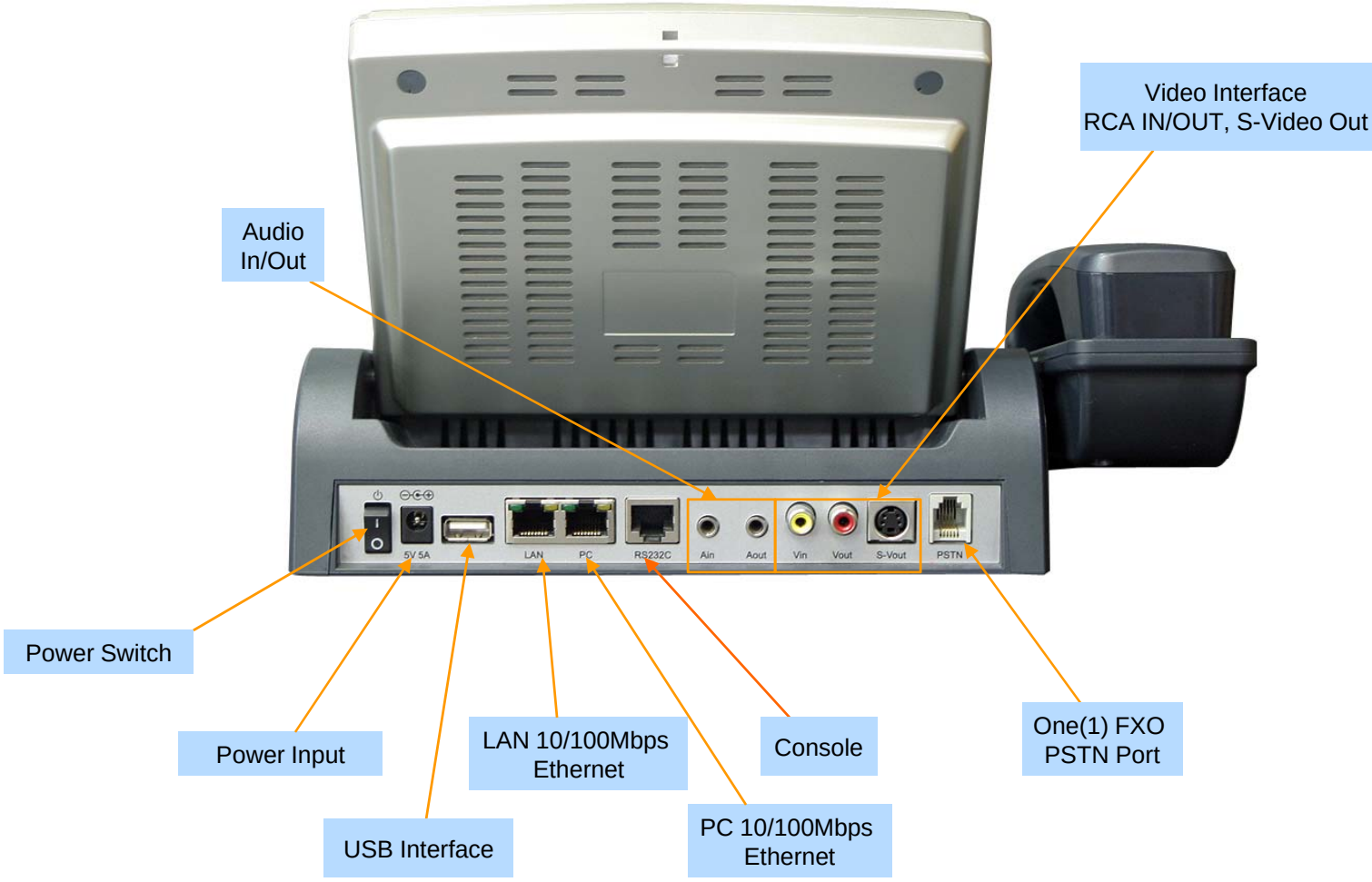
Video Phone

AP-VP280 Video Phone

RISC CPU

High-end DSP

Hardware Specification



Thank you!

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